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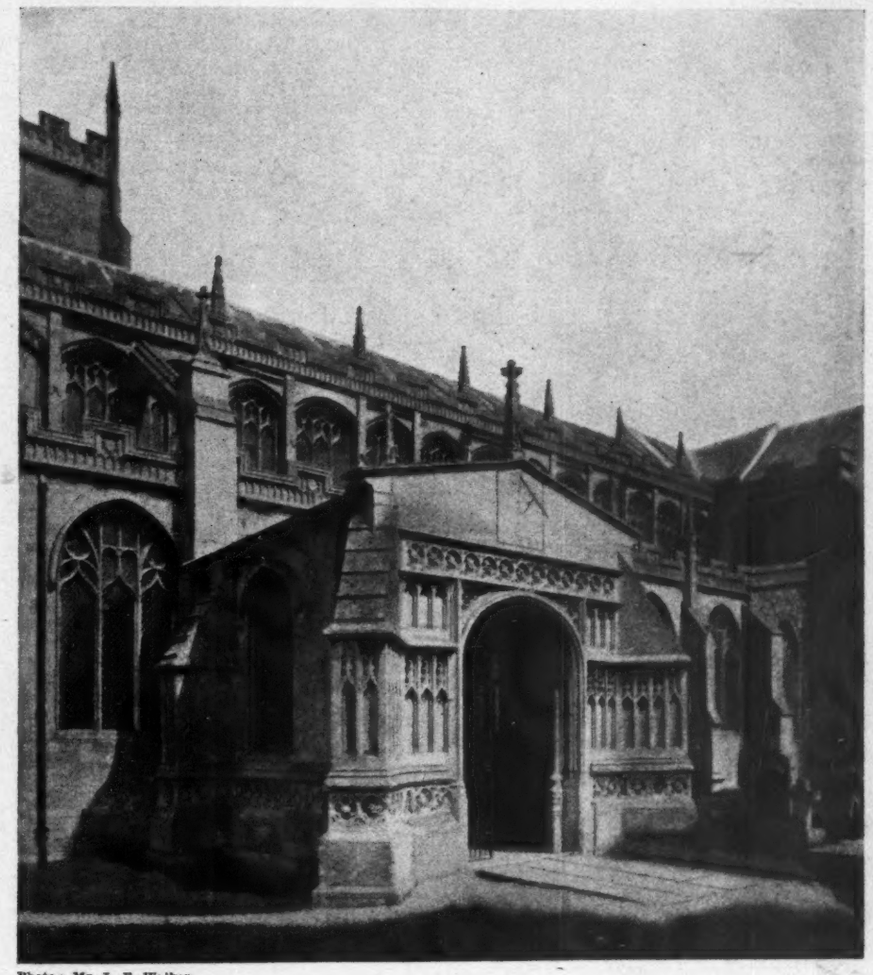


Photo: Mr. L. E. Walker.

Terrington Church, Norfolk: The Porch.

MEETINGS

FRIDAY AND SATURDAY, *September 30-October 1.*

Royal Sanitary Institute. Visit to Portsmouth. Friday: Mr. Joseph Parkin on "Municipal Engineering Works in Portsmouth." At the Guildhall. 4.45 p.m. Saturday: Visits to H.M. Dockyard and to Haslar Hospital. 10 a.m.

FRIDAY-MONDAY, *September 30-October 3.*

Garden Cities and Town Planning Association. Municipal and Social Study Visit to Cardiff.

SATURDAY, *October 1.*

Institution of Municipal and County Engineers (South-Western District). Visit to Kingsbridge and Salcombe Water Board's Works. Meet at South Brent, 2 p.m.

Institution of Municipal and County Engineers. Meeting at the Town Hall, Stockton-on-Tees. 10.30 a.m.

MONDAY, *October 3.*

Royal Society of Arts. Mr. Robert Howden on "The Elimination of Reflections from Glazed Pictures in Galleries." 3 p.m.

TUESDAY, *October 4.*

Institution of Heating and Ventilating Engineers. Dr. H. M. Vernon on "Measurement, in Relation to Human Comfort, of Radiation produced by various Heating Systems." At the Home Office Industrial Museum, Westminster, S.W.1. 7 p.m.

WEDNESDAY, *October 5.*

Institution of Structural Engineers (South-Eastern Counties Branch). Mr. J. A. Jones on "Steel and Concrete."

Institute of Patentees. Opening of the Eighth International Exhibition of Inventions. By the Rt. Hon. the Lord Mayor of London, Sir Maurice Jenks. At the Central Hall, Westminster, S.W.1.

Institution of Sanitary Engineers. Opening Sessional Meeting. Caxton Hall (Hill's Restaurant), Westminster. 7.30 p.m.

THURSDAY, *October 6.*

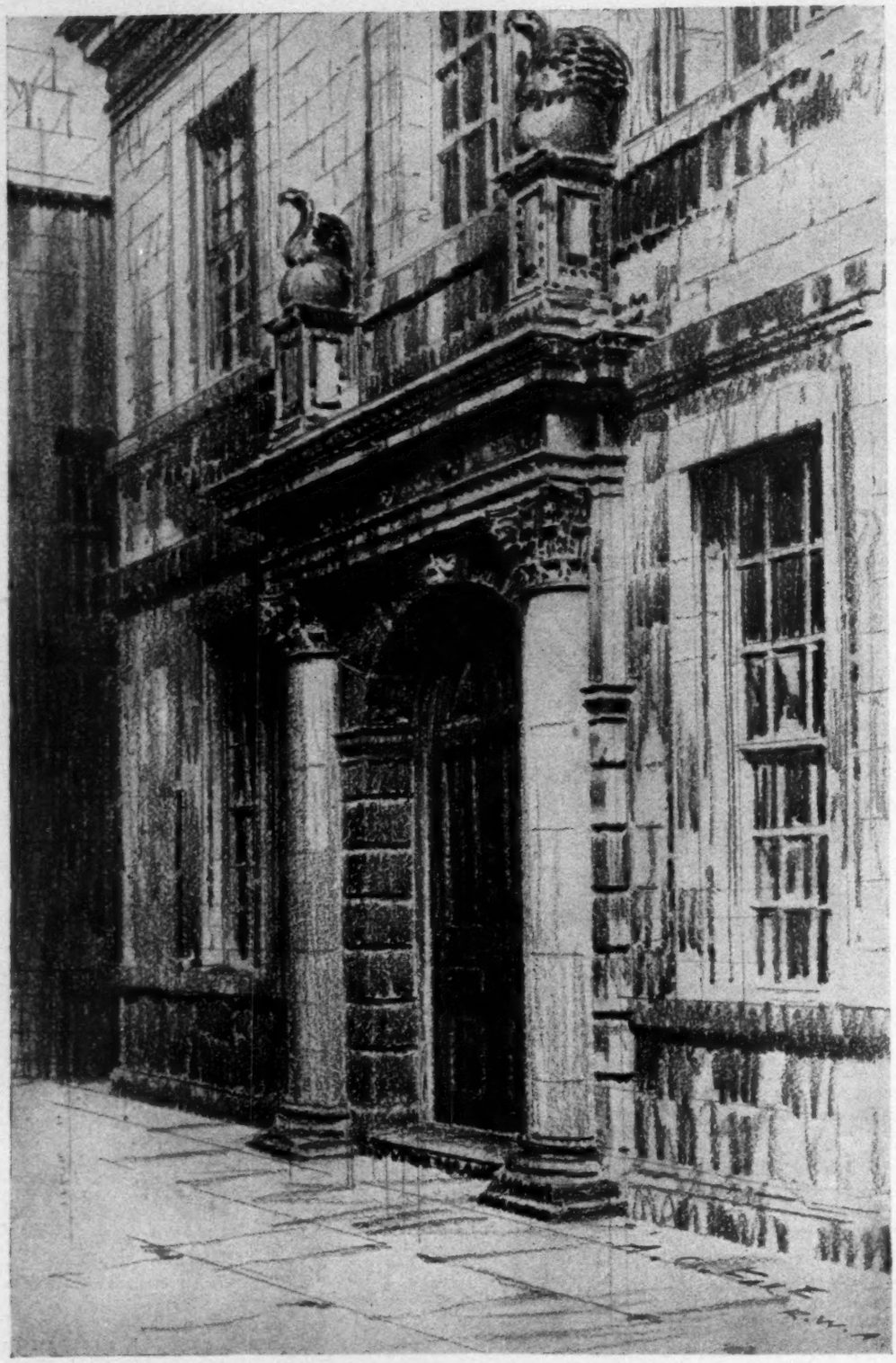
Hampshire House Photographic Society. Mr. E. W. Harvey Piper, Hon. A.R.I.B.A., on "Birth of a Cathedral."

FRIDAY-SUNDAY, *October 7-9.*

Town Planning Institute. Fourteenth Annual Country Meeting. At Hastings.

SATURDAY, *October 8.*

Institution of Municipal and County Engineers (South-Eastern District). Meeting at Sutton. Assemble in the Council Chamber. 2.15 p.m.



Beau Nash's House, Bath.

From a pencil drawing by Mr. A. C. Fare, A.R.I.B.A.

UNEMPLOYMENT IN BUILDING

WE have from time to time referred to the serious results to the Building Industry of the action of the Government and public bodies in the abandonment of building work in the interest of national economy, and have given reasons for believing that the results of that action would lead to widespread unemployment and to the disorganisation of an industry that up to the time of the Government's economy policy had not been seriously affected by the financial difficulties of the country. To what extent we were justified in our belief may be realised by a study of the graphs which we published in our last issue (p. 516). The rapid decline in the expenditure on building from 1931, as shown in Mr. Tatchell's graph, is in unison with the decline in the number of operatives employed, while the cost of unemployment, at the present rate of £13,000,000 per annum, has, of course, increased at the same time. The chart prepared by the National Federation of Building Trades Operatives, giving the percentage of the unemployed in the Industry, shows the rapid rise which has taken place since the abandonment of so much building work by the Government and local authorities, and is a useful contribution to the consideration of the question. Though these graphs may not tell the whole story, they are at least significant, and go a long way to justify the misgivings of those who had the welfare of the Industry at heart, and whose opinions might have been asked as to what economies might have been effected without too great disturbance to an industry which was as fully prepared as any section of the community to make its contribution of sacrifice or service in the hour of need, but which believed with the Prime Minister that true economy lay not in saving money, but in spending it wisely. There are too many people, he told us, both private individuals and public authorities, who imagine that simply by cutting down expenditure they are doing a service to the community. The policy of public authorities and private individuals, he said, while economical " must always have regard to the relative value of cutting expenditure and reducing demands for labour; and unless every public authority proposing to cut down examines its proposals from that point of view, it may not be giving the assistance to the nation which we all wish it to give." Those were weighty words, but they do not appear to have influenced the Government itself nor local authorities, and the results of the " stunt " cry for economy, to quote the Prime Minister again, as far as the Building Industry is concerned, are here for us to face. We are glad to know that these results, while fully expected, have been the subject of earnest consideration by representative architects, builders and others, and are dealt with in a lengthy and important memorandum addressed to the Local Authorities' Economy Committee by a conference of all sections and interests in the Industry. We publish in this issue the greater part of this Memorandum (see pp. 562-3), but we should like to emphasise some of the facts submitted to the Economy Committee which will, we understand, be supplemented by a series of practical and constructive proposals to be submitted to the Chancellor of the Exchequer.

The Memorandum refers to the fundamental position of the Industry in relation to national welfare, that it determines the employment or otherwise of at least two million male workers, without taking into account the large number of professional workers engaged in the Industry, and shows that with regard to unemployment there has been an increase from a total of 255,192 in September, 1931, to 339,889 in July, 1932. On July 25, 1932, the largest percentage of "wholly unemployed males" was in the building and public works group—viz., 18.1 per cent. of the whole total of unemployed insured male workers. No other industry has suffered anything approaching such a diminution in the number of operatives employed.

The effect of increasing unemployment in the buildin industry has been: (*a*) To increase the public charge in respect of Unemployment benefits by amounts varying from 20s. 3d. to 27s. 3d. per week per male worker rendered unemployed. This expenditure is totally unproductive; (*b*) To deprive the general trade of the country of the advantages which would otherwise accrue from the circulation of money in the form of weekly wages; (*c*) To increase the cost of administration of Unemployment Insurance &c.

Interesting figures are given in tabular form to show the fundamental position of the Industry in relation to the national welfare, which should prove instructive to those who, arguing from a theoretical economic standpoint, set the economic " stunt " in motion last autumn, and paralysed the one industry of the country that was working comparatively normally, and whose activities or inactivity affect British Industry generally; but we desire to confine our remarks to the present extent of unemployment in the Industry. According to the Ministry of Labour *Gazette* for August, the number of " wholly unemployed males " in the building and public works groups was 351,606. " The gravity of the situation," states the Memorandum, "is reflected by the fact that these figures occur at the height of the normal building 'season.' What the situation will become when the winter months arrive, and the industry suffers its great seasonal decline, can hardly be contemplated with equanimity."

Valuable as such figures and observations are for the purpose of showing the effect of the economy policy of the country during the past year, so far as the Building Industry is concerned, the Memorandum would be incomplete did it not refer to the " Economic effects of increasing unemployment in the Building Industry," and the " potentialities of activity in the Building Industry as a means of rehabilitation " of the country as a whole. This point of view has been urged in our columns and elsewhere again and again during the past year, and it is pleasing to read in this Memorandum the views of economists in support. The opinion of Sir Arthur Salter, for instance, is quoted that " The Building trade is always a key-point in the economic structure, and any improvement *there* would quickly radiate "; and the conclusions are given of " some forty distinguished members of the faculties of Economics at our Universities," who " represent different schools of political thought." And what do they tell us? " Private individuals and institutions can assist by spending according to their capacity. In cases of doubt, the patriotic motive should weigh on the side of expenditure rather than economy. The Government is at the heart of the economic system, and its operations have far-reaching effects for good and evil. . . . It should encourage departments, local authorities, etc., to speed up their expenditure on all sound schemes of construction and development. The Government should obtain funds for these purposes from the banks, which will thus be assisted in their efforts to put fresh money into circulation."

From this brief summary of some parts of the Memorandum its importance will be realised, though we believe it would have carried greater weight had the names been attached of those representing " all sections and interests in the Industry," and had more publicity been given at the time to the fact that such a conference was to be convened. The observations and conclusions of the Conference are so convincing that the " interests and sections " represented should have been stated, if only as an indication of the unanimity of opinion in the Industry. As it is, the facts and arguments are stated so clearly and forcibly that we can hardly doubt that the Government will, as they are advised to do, " give most careful attention, on the one hand, to the evils of exaggerated retrenchment, and, on the other hand, to the possibilities of advancing towards rehabilitation of the whole industrial and economic structure by means of discriminating encouragement of constructional enterprises."

NOTES

"Build and be Glad!"

THE Memorandum — in the form of an analysis of the building industry in relation to trade and unemployment —which is to be presented to H.M. Government shortly and is published in our columns this week, contains some cogent facts, which we refer to in our leading article. Figures given point to the conclusion that at the present moment not only are 330,000 insured workmen out of employment, to their own physical and moral detriment, but, as a consequence, the general trade of the country suffers through the withdrawing of money from circulation. In addition, since the raw materials used in building are almost entirely obtained from, and manufactured in, this country, the basic industries are deprived of a great part of their home market. Never was the need for building, nor the advantages to be gained from so doing, more pronounced. What is needed is realisation on the part of our statesmen and business men that the building trade is the framework on which industry generally rears itself. That our business men do not as yet appreciate that fact is shown by a remark attributed to Mr. H. W. Corry at the opening of Cunard House, Leadenhall-street. Mr. Corry said that "this building was planned long before the Cunarder 534, which is in abeyance, was planned," and continued, "you might otherwise think we were getting into an expensive building at a bad time." Such apology is ill-timed. Rather should the company have congratulated itself upon getting a fine building at the present low building rates, and upon putting some hundreds of men in work and thousands of pounds into circulation. That is the spirit that is wanted and is necessary in the national effort to pull together towards more prosperous times.

Local Government Economy.

A CORRESPONDENT writes to us as follows: "A deputation representing the building industry may shortly be placing evidence before the Local Government Committee set up to advise on possible directions of economy. It is understood that this Committee, presided over by Sir William Ray, estimates that the economies already recommended will mean a saving of approximately £15,000,000. Although, of course, no certain information is available until the Committee report, probably during the middle of next month, it is suspected that some of the economies will continue to be to the detriment of the building industry, in so far as they will consist of the abandonment or postponement by local authorities of constructional work. It is surprising that the representatives of the building industry in the House of Commons have not formed themselves into a Building Committee, which would be available to advise the House on any aspect of one of the nation's primary industries. Such men as Mr. Train, Mr. Stewart and Sir Walker Smith have a wealth of experience, which no doubt they would be glad to place at the disposal of members of the Government, if required."

Unemployment in France.

A CORRESPONDENT writes: "An interesting example to show why unemployment is not hitting France hard at the present time was told me the other day by a man concerned with a building contract in Biarritz. After the War, owing to the labour shortage, over 3,000,000 foreigners were admitted into France, and have been working in the collieries and other industries. As soon as the depression approached, permission for these foreigners to continue to live in France was gradually withdrawn, so that their jobs might be taken by men of French nationality. The Biarritz contract was the building of a villa for an Englishman, who was anxious that English methods of sanitation and other equipment should be installed. Accordingly, one or two skilled men were sent from England to supervise the work. But as their permits to remain have been withdrawn, they have had to return to this country and, as a matter of fact, work on the contract has been temporarily suspended."

So-called "Functional" Architecture.

WE have been asked to express an opinion on a modern German house of a type which has been occasionally imitated in this country. In the letterpress to the illustration it is described as "beautiful" and 'charming." Individual opinions and tastes in art are varied, and perhaps this should be so, or we should have no variety in artistic production. The design of this house makes no appeal to us; it might be, and indeed suggests, a private house in a nursing or consumptive home for a rich patient desiring privacy — utility (one might say) with ugliness. For a home it appears to be cold, austere and uninviting in appearance. No doubt nearly all our architectural work during the last 60 or 70 years has been over decorated. This is apparent to any cultivated person of moderate or natural good taste. The balcony railing of this house appears to be made of a few lengths of galvanised gas tubing; utilitarian no doubt, and in keeping with the general austerity of the whole building, which would probably be described as functional. In contrast, one recalls with pleasure the charming balcony railings to great numbers of old houses in many towns—all that could be desired in proportion, design and weight of metal. Is functional design difficult? Apparently not. One only seems to require a few standardised parts bolted together and no architect is necessary. It is almost like a cheap greenhouse—all parts marked for erection with glass, putty and sufficient paint for two coats. It is doubtful if this purely "functional" type of house will ever become common or popular in this country. Much could be said in support of a general simplification in everyday house design, especially in regard to the cheap speculative house; but if we go over completely to the so-called "functional" design it will not be necessary for students to undergo years of training at our schools of architecture.

A New British Art Exhibition.

"THE æsthetic quality of most of our manufactured goods is still unduly low and the world market for them is seriously restricted in consequence." This is the indictment contained in the Report of the Art and Industry Committee appointed by the Board of Trade, under the chairmanship of Lord Gorell, on the production and exhibition of articles of good design and

Photo: Mr. L. E. Walker.

Terrington Church, Norfolk.

Church of the East Anglian Type at Faulkbourne.

(*See page* 547.)

everyday use. A series of exhibitions of modern English industrial art, organised by the Government, was unanimously recommended by the Report as the best means of remedying this state of affairs. The need for national economy has prevented the Government from carrying the suggestion into effect for the present. But England is to have its exhibition. This, the first of its kind, is designed to be a stimulus to the British industries and British designers who cater for the furnishing, equipment and decoration of the home. The nation will be able to see that British factories, if given the opportunity, can produce beautiful modern things as cheaply and as well as foreign countries. This is the ultimate object that the organisers of the exhibition have before them. The Exhibition of British Industrial Art is to be held next May. Its difference from the other exhibitions is that everything exhibited will have been approved by a selection committee composed of experts familiar with the conditions of production. It will contain the best and only the best, and represent all progressive tendencies. Domestic planning and equipment, interior decoration, furniture, lighting and heating, pottery, glass, metalware, furniture and dress fabrics, leather-work, luxury articles and economical goods, printing and the allied trades, will be carefully represented, with a proportion of decorative sculpture and painting. A distinctive feature will be a representation of economic home planning, by means of a series of rooms which will indicate the type of civilisation that must be the outcome of modern methods of industrial production. It is stated that the exhibition is not a profit-making project but will be self-supporting, part of the expenses being borne by exhibitors. Should any profit result it will be devoted to a fund for the promotion of future exhibitions of a similar character. The honorary architect to the exhibition is Mr. Oliver Hill, F.R.I.B.A., with whom is associated a group of the younger architects, and the Honorary Organising Secretary is Mr. G. A. Sawyer, C.B.E., 14, Clifford-street, W.1.

Public Health Congress and Exhibition. The third Public Health Congress and Exhibition under the presidency of the Rt. Hon. Sir Edward Hilton Young, M.P., Minister of Health, will open at the Royal Agricultural Hall, London, on Monday, November 14, and continue for six days until November 19. This Congress is organised by a council of representatives from the leading Associations of Local Government, and is the means of bringing together officials from all parts of the United Kingdom directly responsible for the various health services coming within the purview of local government administration. The exhibition, which is held in the same buildings as the Congress, will be representative of firms specialising in the various requirements of health services, and provides an opportunity for the delegates to see, first hand, the latest apparatus and equipment for use in their respective departments. In order to demonstrate the capabilities of various machines, a special type of roadway is being laid down.

Inconsiderate Housing Procedure. At a time like this, when every effort should be made to avoid waste, a case of lack of consideration towards builders has occurred in the North of England. A certain Corporation decided to erect a large number of houses on an estate and advertised for tenders. These were duly forthcoming and the Corporation was recommended by its Housing Committee to accept one, whereupon the Corporation, after a discussion, decided that the financial position of the town would not permit another housing scheme and, on a vote, it was decided to reverse the decision to build, and the tender was consequently refused. Estimators do not require to be told of the waste of time and effort which must have taken place. Luckily, most municipal authorities know their own minds before matters reach the stage where tenders are invited, thus showing consideration to the builders, who tender at their own expense.

Census, 1931, Kent. The latest of the County analyses of the Census of 1931 is for Kent. The population increase between 1921-31, while much less than that shown for the home counties of Middlesex, Surrey and Essex, is still considerable, the population at 1931 being 1,219,273 as compared with 1,141,666 at 1921, an increase of 77,607 persons, or 6.8 per cent. Part of the county lies within the Greater London area, and the growth is therefore part, to some extent, of the general development of the Metropolis. Amongst the most prominent of the intercensal changes is that recorded against Bexley U.D., where the increase of 11,492 persons (53.3 per cent. of the 1921 population) is recorded. Beckenham U.D., Bromley M.B. and Bromley U.D. are other areas where an increase in the last ten years of over 10,000 has been recorded. For the county as a whole, the density is 1.2 persons per acre. There are 297,830 dwellings in the county as compared with 238,276 in 1921, an increase of 25 per cent. As regards overcrowding, it is satisfactory to know that the 1921 figure of 6,478 private families with a density of more than two persons per room has fallen to 5,098 in 1931.

The Dance and 'Draw' at the Building Exhibition. Thanks mainly to the generosity and help of Mr. Greville Montgomery, the enthusiastic work of Mrs. H. V. Lanchester and Mr. Phillips Dales, and the assistance of many willing helpers, the fund for the help of those architects out of employment at the present time will benefit, we are glad to state, to the extent of over a thousand guineas. We have previously referred to the increasing interest which architects are taking in the Building Exhibitions at Olympia, and their support of the two events responsible for this addition to the Fund — the supper and dance and the "draw" for pictures, sketches, etc., generously given by architects and others—has been both adequate and representative. Nearly 500 tickets were sold for the dance and supper, which was carried through with much success, dancing after supper being continued until 1 a.m. with great animation by many well-known architects and their ladies and friends. A humourist has referred to the result of the supper, and dance, and draw as the architects' Thousand Guinea Stakes.

An Old Inn, Ruthin, North Wales.

GENERAL NEWS

Professional Announcements.

Mr. Victor Martin, Chartered Quantity Surveyor, has moved his offices to No. 32, Shaftesbury-avenue, W.1. Telephone Gerrard 5729.

Mr. A. Bernard S. Fryer, A.I.A.A., A.M.S.A., incorporated architect and surveyor, is beginning practice on October 3 at 1, Queen-street, Liscard, Cheshire, and would be pleased to receive trade catalogues.

Bury Town Hall Scheme Banned.

The Ministry of Health have refused the application of the Bury Corporation to borrow £24,800 for alterations to the Town Hall, on the ground that the necessity for new accommodation is not of sufficient urgency, having regard to the need of economy, to justify the corporation in embarking on the scheme at present.

Royal Society of Arts.

A special meeting of the Royal Society of Arts will be held on Monday, October 3, at 3 p.m., when a paper on "The Elimination of Reflections from Glazed Pictures in Galleries" will be read by Mr. Robert Howden, F.R.I.B.A. Sir Edwin Lutyens, K.C.I.E., R.A., will preside. A full-size demonstration model, showing how reflections can be entirely eliminated, will be on view.

An Appointment Vacant.

The Town Planning Committee of Bradfield R.D.C. (Berkshire) is to appoint, acting in conjunction with the South Oxon Joint Town Planning Committee, an assistant to the latter's surveyor, at a salary of £120 per annum. Upon one member remarking that "£120 is an outrageous wage to pay a man of technical training," the chairman replied, "It is a good prospect for a young fellow. In time we may take him on and save the surveyor's fee."

International Congress of Building Societies.

In order to stimulate interest on the Continent in the International Congress of Building Societies, which is to be held in London next June, the chairman and the honorary secretary of the British Organisation and Reception Committee, Sir Harold Bellman and Mr. G. E. Franey, are leaving on Saturday for a tour of the chief cities of Germany and Austria. Among the places to be visited are Berlin, Stuttgart, Salzburg, Vienna and Buda-Pest. At the invitation of Herr Wilhelm Flatz, who attended the annual meeting of the National Association of Building Societies at Bournemouth last May, they have promised to attend a meeting of the Bausparkasse der Gemeinschaft der Freunde, the corresponding Austrian organisation, at Salzburg, on October 9.

R.I.B.A. (Archibald Dawnay) Scholarships, 1932-1933.

In accordance with the terms of the will of the late Sir Archibald Dawnay, the R.I.B.A. have awarded one Scholarship of £75 for the academical year 1932-1933 to Mr. A. W. Varcoe, of the School of Architecture, Edinburgh College of Art, and one Scholarship of £50 for the academical year 1932-1933 to Mr. M. G. Gilling, of the Liverpool School of Architecture, University of Liverpool.

Mr. J. R. Baxter, of the Liverpool School of Architecture, University of Liverpool, who was awarded a Scholarship of £75 for the academical year 1931-1932, and Mr. D. L. Couves, of the Armstrong College School of Architecture, University of Durham, who was awarded a Scholarship of £50 for the academical year 1931-1932, have been granted renewals of their Scholarships for the year 1932-1933.

The Scholarships are intended to foster the advanced study of construction and the improvement generally of constructional methods and materials and their influence on design.

"THE BUILDER" DEBATE.

LV.—NORTHERN OR SOUTHERN CONTRACT PRACTICE?

SIR,—Running through "Positive's" argument or statement of his case may be found a characteristic assumption that the form of contract practice which transfers all risk and responsibility from the shoulders of the architect to those of the builder is the more to be preferred. In respect to this, it is a revealing paragraph in which he takes as an example a defect developed in the pipework of a heating system. Without departing from the line of reasoning here adopted, it might be restated thus :—

"Acting in what I believed to be the best interests of my client, I entered into a contract in which, under my instructions, the heating work was carried out by 'S-and-so.' I examined the work carried out by them during progress and upon completion, and issued a certificate for payment of their account. I should not have issued that certificate had I not been completely satisfied with the quality of both the materials and workmanship. I employed 'So-and-so' to do this work because I believed that their knowledge and skill were superior to those of the general contractor, and, incidentally, by stipulating that the work was to be performed to my own satisfaction, I claimed that my own special knowledge and skill was superior to that of the general contractor. Unfortunately, neither the specialists' skill nor my own skill was sufficient to obviate a breakdown, as the result of which much damage was done to plastering, woodwork, block floors and decorations, all of which had been carried out by my selected body of specialist experts. To each of these I have also issued certificates carrying with them implications of my entire satisfaction with their work, and it would be useless for me to call upon them to make good the damage without payment. But, fortunately, under the conditions of contract, these specialists, though selected by me, are sub-contractors, and I believe, therefore, that I can make the general contractor liable for the greater part of the cost of reinstatement without loss to my client."

Obviously if this line of reasoning is sound, and it is but the comfort and well-being of architects that is to be sought, then "Positive" has established his case. But is it sound? Having thus made himself comfortable and secure, "Positive," as is customary, looks round for a further factor of safety. Still claiming superior knowledge and skill, but disclaiming responsibility, in the event of being engaged in a Northern contract, he would place the responsibility on the shoulders of the clerk of works. Here he offers the client the cold comfort of dismissing the clerk of works, and leaves him, the client, to "foot the bill." In doing so he underestimates the Northern architect, who also well knows how to take cover. The Northern architect takes care to tie up the contractors for individual trades in much the same way as that in which the Southern general contractor is tied up.

I have read and reread "Positive's" statement of his case in search of any claim that the Southern practice makes for better building. He makes no such claim, perhaps wisely. In the North it is claimed that the subdivision of the work amongst various contractors, all of whom have an intimate knowledge of their own craft and the uses and limitations of their materials, makes for both better and cheaper building. That there is something in this claim appears to be borne out by the growing practice in the South of assigning a very large part of the work to specialists. Where such specialists are nominated by the architect the Southern general contractor has little or *no* greater control of them than has the mason or bricklayer, who is usually called "the builder" in the North. In both cases effective control can only be made possible by way of appeal to the architect. Perhaps, however, co-ordination is here the better word. The one weakness of the Northern system is that it is sometimes difficult to obtain proper co-ordination of the work, and especially so if the various firms concerned come from widely separated towns. But if it be granted that better and cheaper work is obtained by employing such firms, then the little amount of additional worry to the architect is but a small price to pay for these advantages.

NEGATIVE.

COMPETITION NEWS

Cement in the Design of Houses.

The Cement Marketing Co., Ltd., announce an architectural competition for designs for houses promoting the artistic use of cement. Cash prizes of 210 gns. are offered. Designs are required for houses of four different types: Type (*a*)—A terrace, three-bedroom house, costing £500 to build, suitable for a scheme of 48 houses in terraces of six. Type (*b*)—Semi-detached three-bedroom house costing £600 to build. Type (*c*)—Semi-detached four-bedroom house costing £850 to build. Type (*d*)—Detached four-bedroom house, with garage either incorporated or detached, costing £1,000 to build. Provided the competitors comply with the above schedule according to category and providing the bedroom accommodation, they are free to include what other accommodation they consider necessary within the limit of cost. The prices specified (which are builders' costs without profit) are exclusive of land and all incidental charges, such as architects' fees, and the provision of temporary builders' road or a permanent concrete road and are exclusive of fencing, but include drainage on the assumption that drains connect with the main sewers passing the house. The Cement Marketing Co., Ltd., offers a first prize of 30 gns. and a second prize of 15 gns. for each type, and one special prize of 30 gns. will also be awarded for the best set of drawings for any one type. The assessors are Messrs. Louis De Soissons, O.B.E., F.R.I.B.A., S.A.D.G.; Howard Robertson, F.R.I.B.A., S.A.D.G., and P. D. Hepworth, F.R.I.B.A., E.D.B.A., R.S. The competition is open to anyone resident in the British Isles practising as an architect and/or surveyor, whether as principal or assistant. All entries must be delivered to the Publicity Department, Cement Marketing Co., Ltd., Portland House, Tothill-street, S.W.1, not later than Saturday, December 3, 1932.

£1,000 All-British House Competition.

The object of this competition, promoted by the Incorporated Association of Architects and Surveyors, was to encourage the employment of all-British building materials, and to emphasise the advantages of commissioning a qualified architect to design and supervise the erection of such a house. The cost of the house, excluding the site and architect's fee, was not to exceed £1,000. Prizes of fifty guineas, twenty and ten guineas were offered.

The assessors were: The President of the Association (Sir Edwin Lutyens, K.C.I.E., R.A.), assisted by Major Frederick G. Sainsbury, F.I.A.A., M.I.Struct.E., and Messrs. Alwyne Tutton, A.R.I.B.A., F.I.A.A., Charles H. Taylor, F.I.A.S. (Quan.), F.I.Arb. (Taylor and Smith, quantity surveyors), Alfred Harris, F.I.A.S. (Quan.) (Widnell and Trollope, quantity surveyors), R. L. Roberts, M.A., F.I.O.B. (President of the Institute of Builders); Miss Winifred Johnson.

The following have been adjudged to be the prizewinners:—First, Mr. Edward H. Banks; second, Messrs. Godman and Kay; third, Messrs. Rose and Abram.

The designs submitted will be on exhibition, open free to the public, at the premises of the Incorporated Association of Architects and Surveyors, 1, Wilbraham-place, Sloane-street, S.W.1, from October 3 to October 22, inclusive, 10 a.m. to 8 p.m.

Entries to the number of 371 were received from all parts of the world.

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Architects' Designs for Small Houses.

SIR,—I read with interest your correspondent's letter in last week's issue of *The Builder* with regard to architects' designs for small houses, and immediately set myself the "task" of designing a house to suit the conditions he mentions. Within a short while I had got hold of several workable schemes.

I suggest that if "speculative builders" would consult competent architects, their difficulties in this respect would be solved and they would also help us young unemployed men.

A.R.I.B.A.

Lincolnshire Churches.

SIR,—Although I cannot definitely answer Mr. E. A. Jollye's query regarding the stone used in the building of the South Lincolnshire churches, I may be able to put him on the possible track of discovery. Caen and Barnack stone was used in certain outstanding cases in a group of well-known churches a little to the south of those named in Mr. Guy Dawber's letter. I speak from memory when I say I think the magnificent tower of Cawston Church is of Caen stone.

If Mr. Jollye will look up *The Builder* for June 13, 1930, he will find an excellent article by Mr. E. J. MacRae, A.R.I.B.A., City Architect of Edinburgh, dealing with churches in this district, which contains much useful information. I consider the best churches in this area to be even finer than those mentioned by Mr. Guy Dawber in his letter to *The Times*, with, perhaps, the exception of West Walton, which, by the way, is in Norfolk.

WILLIAM DAVIDSON.

Architects and Alleged Illicit Commission.

SIR,—May we be permitted to ask "Puzzled" what he expects from Conduit-street? They can only give us reassurance or negation of the original allegation. The fact that an allegation has been made is proof in itself that some architects do accept illicit commissions, after having promised and agreed not to do so.

The question is, therefore, one of honour, and we can say that it is a fact that some architects are dishonourable What is the remedy? Can we look to Conduit-street? Can honour be ruled by law and precept? There are dishonest solicitors, physicians, dentists and surgeons, even though their respective societies exercise the strictest vigilance Conduit-street can do nothing.

EIMMOT.

Sun Traps and School Planning.

SIR,—Your recent leader on "Sun Traps," in my opinion, omits one important point, viz., the effect on the eyes of children reading, writing or drawing on white paper in bright sunlight. Several times during the past year I have seen children evidently suffering from their eyes, and on inquiry found that they had been working for three hours in bright sunlight. Their usual remark—"It was awful"—gives another point of view with regard to sun traps. This happens in a modern school which, of course, has no blinds. No designer of schoolrooms would submit to similar conditions with regard to his drawing-board.

A. W.

"Beckford and Beckfordism."

SIR,—The above very brilliant essay by Mr. S. Sitwell has a somewhat curious if not amusing interest for architects. That is my excuse for inquiring if one of your readers can throw any light upon the designs, what were the names of the architects and others concerned in the erection of the once famous Fonthill Abbey, whether copies of the original drawings have been preserved, and, if so, where they can be seen. From Turner's painting and a few small aquatints—but especially from the flowery descriptions given by so many writers about the romantic millionaire-author and his grandiose building operations in Wiltshire—one is led to suppose that scarcely outside the pages of fiction was there such an amazing erection, or such an exuberance of decoration, as at Fonthill. That the enormous tower came tumbling down like a pack of cards within a few years of its completion suggests many things besides hasty and shoddy construction. Still, for such a group of buildings even in 1803 (costing, it is asserted, upwards of £300,000), and erected for an admitted great connoisseur of the arts, experts must, presumably, have been employed, and experts whose names must at that time have been well known throughout Europe—for we know this generous client did not confine himself to British craftsmen. It is interesting, however, to observe that one severe critic of the author of "Vathek" emphasised the fact that the designs "were in the most flamboyant of bastard Gothic!" Though we have a fair idea of what is meant by that expressive term, it would be interesting to see exactly how it applies in this instance to the operations of the exacting and somewhat exotic Beckford.

F. SIDNEY WEBBER, F.R.I.B.A

Hints on Building Practice.

SIR,—With reference to the article "Hints on Building Practice, XIII," by Mr. J. R. Taylor, while we wish to compliment Mr. Taylor on the very practical information contained in the article, we would like to draw attention to one point which is in error.

Mr. Taylor states that wood blocks, if laid tight up against a cavity wall, may find accommodation by forcing a course of bricks into the cavity. He goes on to illustrate this possibility by referring to a case in his experience where maple floorboards accommodated themselves in this manner. It would be impossible, however, for wood-block flooring to do this as the blocks would take the line of least resistance and buckle at the walls before exerting sufficient pressure to push a course of bricks out. Boards, on the other hand, being nailed, it is possible that the line of least resistance might be provided by the course of bricks. It will be appreciated there is a considerable difference between the vertical line of resistance in the case of block flooring which is laid in pliable mastic but not otherwise secured to the bed, and board flooring which is securely nailed to a foundation.

CONTRACTORS.

[Mr. Taylor's reply will be given next week.—ED.]

"Hot Water in Plenty."

SIR,—In your issue for September 23, "Foreman of Works" states that, with the arrangement of pipes shown in the illustration to my article, a reverse circulation would occur as soon as any hot water tap was opened, and, in consequence, cold water would pass along the return pipe and mix with the hot water coming from the flow-pipe side of the open tap. This would be true if there were no hot water storage tank or cylinder fixed between the cold water supply connection and the hot tap, but this is an almost unheard of omission in domestic hot water supply systems, even of the cheapest type, and although some such a cylinder or tank was not shown on my drawing, it was reasonable to suppose its existence would be taken for granted, in which case the criticism falls to the ground.

I might have made this more clear by adding the description "primary" to the flow and return pipes shown in the drawing, but the article was intended for the information of lay readers, many of whom purchase the special numbers of *The Builder* on sale at the Building Exhibition, and it was desirable to avoid the use of technical terms wherever possible.

It is, of course, best to have a separate flue for the auxiliary boiler, but reference to the article will make it quite clear that the arrangement showed the addition of this boiler to an existing system, and in such a case the cost of building a new additional flue might well prove an insuperable obstacle.

If an efficient damper is provided to the flue-pipe of the independent boiler, and it is kept closed when this boiler is not in use, the efficiency of the range will not be impaired, and, indeed, the arrangement shown and described is based upon a job of which I had first-hand knowledge, and it was a very satisfactory performance.

L. E. WALKER.

Plastering.

SIR,—Being a plasterer by trade, and taught by men of the old school that there is only one way to do plastering—i.e., the right way—it has been a shock to me to see some of the work left at the present day. During my travels I have visited jobs where the plastering resembles the hills and valleys of England — window angles that would fit a hoop, the back and front of same being anything up to ¾ in. out of line; solid moulding cornices all shapes but straight, and the mitres brushed out, with a thick cut line to show the intersection; ceilings like the waves of the ocean—no trouble taken to straighten them; and the architect or surveyor passes it all! Why is it?

I know that competition is keen, and that some quotations from plastering firms are absurd, but why do the men in charge put up with it? The clerk of works, architect, surveyor and builder—surely some of them have seen good work and realised the advantages.

I have known firms spend pounds letting decorators rub the walls and ceilings with glass paper to make a respectable surface for decorating. Why not allow more for the plastering and have a good job to start with? Insist upon good workmanship.

My father is a plastering contractor, and he has taught me, and all his improvers, real plastering. Our builders boast of the quality of their plastering, and architects, surveyors and builders come from all over London to see it, but they do not enforce it on their own works. Why? It pays in the long run. Men with 40 years' or more experience in plastering openly admit that they have never seen work like it. Decorations are done straight on the plastering and there are no lining papers to hide trowel marks and bumps, and wood panels fit perfectly. This is plastering.

Let us hope that the day will come again when all this will return as a standard. It is the oldest trade in the world; let us make it the best.

READER.

An Old House, Conway, North Wales.

HAMPSTEAD TELEPHONE EXCHANGE

REVIEWED BY L. W. THORNTON WHITE, A.R.I.B.A.

THE Finchley-road, linking the West End with the Great North-road, has a national rather than a metropolitan significance. One remembers the wide-sweeping climb out through north-west London, meditates on its enervating character while speeding through the east midland plains, and recalls it again on approaching the similarly stimulating contours of the North, *en route* for Scotland. The road has intrinsically so strong a character, and holds so much promise, that in ascent one scarcely notices the buildings of Hampstead or the unconscious witticisms of Golders Green. Architecturally, the Hampstead of Finchley-road appears to be in two minds over this truculent stretch of macadam; one half of its buildings are resentful and endeavour to assert themselves forcibly—gabled headgear set at brazen angles above oriel eyes, polished brass denture and protruding jawbones. The other half is completely submissive, appalled, and terrified out of all semblance of exercised imagination. This was until a year or two ago, when a third, better-mannered and entirely masculine architecture grew up at intervals along the pavement, an architecture which, while mindful of its own importance, acknowledges the supremacy of the ascending roadway and stands aside in respectful dignity, as military men would stand while the King passes by. The new Hampstead Telephone Exchange, designed by Mr. Christopher Bristow, A.R.I.B.A., of H.M. Office of Works, is a field-marshal among these men—it is dressed in superb uniform, is immaculately groomed, and possesses quiet but distinguished personality.

It might be asked why an exchange for automatic telephone service should find itself dressed with such exactitude. To be of economical service, the exchange must of necessity live among its subscribers. A telephone exchange in an industrial district may be expected to present a different character from one in residential environment, as this building is. The problem has two solutions—either the building may take full account of its purpose and express pride externally in the delicacy, efficiency, characteristic rhythm and beauty of pattern integral in its internal apparatus, in its service to the community, or it may skim lightly over these matters and simulate the conventions of that community's architectural uniform. The latter solution has been adopted, and, while I do not agree that it is the right choice, I cannot but admire the consistent and scholarly manner in which it has been carried into effect. It has the courage of its convictions and remains a polished essay in the English Formal Manner—an essay unblemished by the slang of "moderne" ornament, by the coarsened lumps of Portland stone or caricatured classicisms which belittle much of the "Georgian" work of the present day, especially that of municipal or official parentage. Indeed, the building is curiously convincing. It is of brick, with accents and punctuations of stone (whereby it is vastly superior to buildings of equal quantities of brick and stone, buildings which do not know whether they are of brick with stone dressings or of stone with panels of brickwork); it is quite decided in the preponderance of its wall surface over window void, without being dramatically devoid of window; it stands on an adequate base and wears excellently-placed string courses (the Field-Marshal in it here rebuking the adjoining Tommies, whose belts slip up and down in confused array); its roof is of the right pitch, and its cornice in considered scale; above all, it is most convincingly symmetrical on an axis centering about a window of meritorious detail. The latter is worthy of close study by those who appreciate rightness in classical stone form. It is essentially part of the conventional uniform.

The considered tone and colour values of the brickwork contribute to the success of the main elevation equally as much as the finely balanced relations between solid and void. A close examination of these values reveals a base of dark tone, of dull colour, but of lively texture—horizontal recessed courses and a predominance of dark red and purple bricks to give the dark tone, more purple than red for the duller colour, and a sprinkling of light red bricks to ensure the liveliness of texture. The main walling above is lighter in tone, brighter in colour and quieter in texture—there is about an equal proportion of light and dark red bricks to give the lighter tone value, scarcely any dark purple bricks to dull the colour value and for the quieter texture the range between lightest and darkest brick is confined. Continuing the progression, the gauged brick arches over the windows are still lighter in tone, brighter and redder in colour and distinctly flat in texture. Further, the concentrated lines of stonework—lighter, brighter and flatter still—continue in sympathetic metre. In course of time the weathering and darkening of the brickwork and the lightening of the mortar jointing will make readjustments in chromatic values with a compensating enrichment in texture. This readjustment has already taken place in the main elevation brickwork of Mr. Edward Maufe's First Clubland Church at Camberwell, where the weathered relationship of mortar to brick tones in the upper half of the building may be studied in conjunction with the unweathered build of the lower half.

The plan of the building is governed by two major considerations—a site falling rapidly away from the road and ready facility for extension to house double the number of lines at present accommodated. The former allows most of the secondary accommodation to be planned in a sub-ground floor at the back of the site, while the latter consideration has suggested a T-shaped plan capable of extension on the upper floors to the rear. External lines enter the building below the pavement and immediately make a preliminary fanning into smaller cables in a long chamber at sub-ground-floor level. At this level, too, are planned heating chamber, lighting and power plant, with stores for external workmen at the back. Immediately above the cable chamber is the main frame, upon which the cables are further divided into single lines. The remainder of the ground floor (which will eventually accommodate further apparatus) contains the battery room and temporary offices for the fittings inspector and his staff, while at the rear is mess room and lavatory accommodation for the workmen. On first and second floors is the Ericcson apparatus which, with restless vigilance, deals automatically with subscribers' requirements and with equal efficiency registers costs. Room on the first floor is found for the duplicated power plant and battery charging dynamos, as well as for a special ventilation plant, engineers' and inspector's rooms. The principal room on the third floor is a moderate-sized switch room, a necessity, even in an automatic exchange, for dealing with incoming calls from manually worked exchanges, calls made by blind subscribers and for dealing with difficulties of connection. It is well placed at the back of the building, a position free from traffic noise. The rest of this floor contains offices and retiring rooms for both male and female staff, accommodation which is continued on the fourth floor within the roof. Two symmetrically planned staircases serve from Finchley-road to all parts of the building and an external fire escape stairs connects all floors to the yard level. There is space for a lift if future requirements demand one. Internal communication is direct and straightforward, and every part of the building receives ample daylight.

Materials and Construction.

The choice of materials and structure would seem to be governed by three considerations: dustless apparatus rooms, vibrationless floors, and, above all, a rigidly fire-resisting building—for a burnt-out telephone exchange would dislocate the life and business of Hampstead for many months. The building is of steel-framed construction, completely encased in concrete and with 14 in. brick in-filling walls. Floors are all of concrete reinforced with rolled-steel filler joists. The pitched roofs and the flat over the switch room are of hollow-tile reinforced concrete, for insulation purposes, the latter covered with asphalt. A reinforced concrete raft carries the whole building, and all walls below ground level are in concrete in which waterproof cement was used, in addition to the usual asphalt precautions against water. Externally, the main elevation is faced with 2 in. Lawrence's bricks, specially selected in various tone and colour values as previously described. The stonework is entirely of reconstructed Portland stone and the windows of steel (opening in the apparatus rooms for cleaning purposes only). The roof is covered with sand-faced "Lombardic" under and over tiles laid on 2½ in. by 1½ in. battens and rough boarding. The dormer windows have pediments of wood carried on the structural reinforced hollow-tile roofing slabs and are covered externally in lead. Forming a coping to the parapet walls is a generous cast-iron gutter, from whence rainwater is conducted

Osyth Priory, Essex. (*See facing page.*

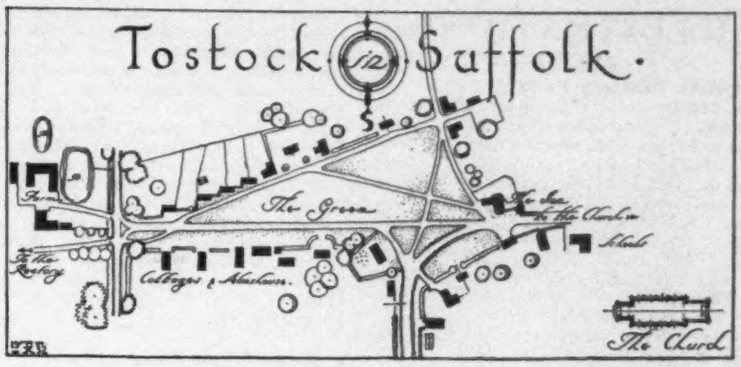
An Example of Church and Domestic Characters combined.

in square cast-lead fall pipes, by way of excellently designed cast-lead rainwater heads—heads which in their design show a close appreciation of the craft possibilities and limitations of lead burning. The lower sections of the rainwater pipes are, for obvious reasons, in cast iron. The entrance doors, of oak, sit above steps of York stone, and open on to black and white marble-paved floors of the entrance halls. Generally, all internal communications are finished with granolithic flooring and painted Keene's cement dados. In the offices and retiring rooms, a cork matting is laid direct on the concrete floor—linoleum in the private offices. The switch room is bright with an apple-green painted dado above a maple block floor. A similar floor finish is to be found in the apparatus rooms, where all angles are rounded or coved and both walls and ceilings enamel painted. Teak doors disconnect these rooms from the staircase, and fibre mats suggest that all shoe dust should remain without. Both rooms receive filtered air through ceiling ducts—clean air which finds its own way out of the building by way of aluminium flap ventilators fitted in some of the window panes. This air is not heated, for the temperature is independently maintained by radiators. The generators in the lower apparatus room rest on thick bases of cocoanut matting to eliminate vibration. Well-arranged racks of tools along the rear wall add impressive testimony to the detailed efficiency of the equipment. In the battery room one finds a beauty born of danger eliminated—rigid rows of huge glass containers displaying the brightest red and blue terminals arched from cell to cell across the access gangways, and all set above a grey painted acid-proof asphalt floor coved into a skirting and deep door threshold. In this room, too, the electric light wiring is sheaved in lead in lieu of the normal corrodible steel conduit. Amidst the remarkably clean and energetic design of the automatic apparatus, it is a little irritating to see the electric lighting conduits in the building generally leaping exposed across wall and beam.

The two staircases are of pre-cast concrete steps surfaced with carborundum. The south staircase surrounds a steel caging for a future lift. This caging is somewhat heavier than is usual in such positions, for it is entirely self-supporting from basement level up to roof, a precaution against vibration. Flanking the building on either side, two wrought-iron gateways lead to the yard space at the back. The levels of the site have obviously made the yard problem a difficult one, but with slopes limited to 1 in 14, the architect has reached a very workable solution.

* * *

Like all good soldiers, the field-marshal of Finchley-road stands silent and alert, ready to serve the community instantly. After appropriate and mellowing service he should be awarded orders and decorations—a little colouring, perhaps, on the crown and cartouche of the window pediment and a proud ribbon and hanging medal, also of well-conceived colour, reminding one of telephone call-box and trunk service within. An architectural order of merit, too, would not look amiss on so dignified a breast.



THE VILLAGE LAYOUT

IV.—TOSTOCK, SUFFOLK.

By FRANK BENNETT, A.R.I.B.A.

Tostock is the loop village, hanging like some modest flower on the curved branch of a roadway. It is the smallest of villages, but large and complete enough, with church, vicarage, "Hall," farmhouse, barns, school, post-office and store, to be distinguished from a hamlet. Although reached within ten miles of the shire town of Bury St. Edmunds, its mere handful of inhabitants potter about blissfully as if the naughty world and Tostock knew nothing of each other.

This complaisance undoubtedly arises from the pleasant secluded form of the layout, mainly triangular, closed in by trees and little cottages, opened at the corner, where an occasional motor-car whizzes round the bend, and capped at the point by a farm group as delightful as any to be seen in the three counties. The main road as it curves in and away throws off minor paths, which traverse the village to join up with new arteries, or amble away to disappear among the fields.

The church, as usual, stands off proudly from the end of the village, but the vicarage, contrary to precedent, deposits itself like a counterweight far off at the other end. Again, some of the cottages break an old, although doubtful, precedent. Instead of fronting squarely on to the green, on the principle of human interest first, they turn for the best aspect of the sun, on the one side north and south, and on the other east and west. This east-west disposition, with blocks facing one another at regular intervals, might well be adapted to advantage by speculators.

The cottage illustrated, which is a type for the village, projects three dormers from its attic bedrooms in a symmetrical arrangement held up by chimneys in the gable ends. It would be difficult to make a more economical building, but how complete it is in composition and pleasant in the contrast of materials!

It will be noticed that the farm buildings, standing hard up to the roadside, group around a court, the house, the granary and the garage taking one corner and side, the barn (an open square with central yard) taking another. The cart-track, passing by the duck-pond, bisects the court, turns and passes through a gate into the fields. In relation to the compass points and the lie of the farm lands this is probably an ideal arrangement.

The church is a good example of late Gothic flintwork, but does not reach the excellence of many in the county. The one at Morley St. Peter is ideal, and shows what a small church might be. A Norman doorway proclaims its venerable origin, and black, pantile roofs enclose its four, well-shaped components—tower, nave, chancel and porch. The flint-walled tower, with dignified humility, stands just high enough to be seen among nearby trees and over the slight waves of the surrounding plain. And the surmounting weathercock is in keeping with the unpretentious, rustic character.

East Anglia is thick with fine churches. Few places in the world could boast so many packed into so small an area, each and every one quite different, but all stamped with the same family likeness. The mellow grey walls of their mediæval towers, attenuating into a pale green flèche, seem to beckon through the swelling trees at every three or four miles along the road. Constructed mostly in the 16th century at the time of great prosperity among the weavers, they carry the distinguishing marks of the Perpendicular style, and commonly show walls faced with knapped flints of a fine black colour, laced and quoined with stone imported from Caen. Towards the borders and over into Hertfordshire the vernacular changes more to red brickwork.

Actually the real architectural wealth of this country lies much more in the churches than in the farms and cottages which cluster nearby them. Country people in past generations gladly gave wealth to the church which sometimes they grudged even to the beautifying of their own homes. Often the church, a huge mass of skilfully wrought stonework, enclosing within its walls many fine specimens of early craftsmanship, overshadows the village, and in proportion of bulk seems even greater than all the cottages put together.

Church at Morley St. Peter.

Typical Cottage, Tostock.

ILLUSTRATIONS

PLATES

Hampstead Telephone Exchange.

An article on this building is given on page 546. The contractors were Messrs. Hammond and Barr, Ltd., and the following firms were associated with the work: Edward Wood and Co., Ltd., steelwork; Empire Stone Co., cast stone; Diespeker and Co., Ltd., hollow tile roofing; Humphries, Jackson and Ambler, Ltd., metal casements; A. McDougall and Sons, wood block floors; Fenning and Co., Ltd., marble pavement; Ames and Finnis, roof tiling; London Brick Co., and Forders, Ltd., "Phorpres" Fletton building bricks; T. Lawrence and Sons, facing bricks; Ragusa Asphalte Co., Ltd., asphalting to basement; The Central Joinery Co., Ltd., joinery; Stuart's Granolithic Co., staircases; Stoner and Saunders, rainwater heads and down pipes in lead; The French Asphalte Co., roof asphalte.

Mr. Christopher Bristow, A.R.I.B.A., of H.M. Office of Works, is the architect.

House at Seaford, Sussex.

This house has been recently completed in Belgrave-road, and is built of flint with brick dressings, a somewhat unusual method in these days. The materials give a pleasant character and texture to the building, and are in sympathy with the surrounding district, the flint being at hand. The ground floor accommodation provides hall, large living room, meal room with loggia facing seawards, and kitchen, etc. The first floor has three roomy bedrooms and large landing. A feature is made of two turrets flanking the front entrance. The roof is thatched with Norfolk reeds, and is a good specimen of the thatcher's art.

The builder is Mr. W. Banks, of Framfield, Sussex. Casements and leaded lights are by George Wragge, Ltd. The architect is Mr. Alwyn Underdown, F.R.I.B.A., of Seaford.

Infant Welfare Centres, Kingstanding and Billesley, Birmingham.

These two centres illustrate a type of building which is being erected in various parts of Birmingham. Kingstanding Centre has balanced elevations. The walls are faced with multi-coloured brick, with natural stone dressings for plinth copings and entrance doorway, the roof over the central portion being covered with multi-coloured "Reynardo" tiles. Both buildings provide similar accommodation, consisting of a large central waiting hall, with wings at either end. The left-hand wing contains the weighing room, nurse's room and doctor's room; adjoining the latter are two dressing rooms. In the right-hand wing are the classroom, staff room, and a room for children. At the rear of the waiting hall and opening out of it are the patients' lavatories, dispensary and tea service. The planning is altered in either case to suit the aspects of the site. Messrs. Nicol & Nicol, FF.R.I.B.A., are the architects.

Cottages at Burnham Market, Norfolk.

In our last issue we published a note concerning some cheap cottages now being erected under the 1924 Act at Burnham Market. We reproduce this week a drawing of these cottages. The total cost of houses of a similar type recently erected has been under £300, including cost of land and legal charges. The rents, including rates, have been fixed at 3s. 6d. per week. This, of course, includes State subsidy and local rate aid; the economic rent of such houses would be about 9s. 6d. per week. Fixed baths are not fitted to all houses, but where local water conditions, etc., allow for a bath (fixed), the bath is fitted at end of washhouse with access door from back room shown as scullery.

The cottages have been designed by Mr. H. East, F.F.A.S., Housing Architect to the Docking R.D.C.

£1,000 All-British House Competition.

The award of the assessors in this competition is given under "Competition News," page 544. We illustrate this week the three premiated designs.

SHEFFIELD CITY HALL

Our readers will probably be interested in a letter which Sir Owen Williams has addressed to *The Times* on the subject of the new Sheffield City Hall, and in the editorial comment upon it which appeared in the same issue. Having referred to the construction of the hall at a cost of nearly £500,000, Sir Owen continued:—"Assuming (although a recent visit to work-starved factories in the city makes it incredible to me) that the city of Sheffield found itself with £500,000 which it could not more usefully employ in its basic industries, then it is pertinent to examine the material object on which it was thought fit to make this expenditure. . . .

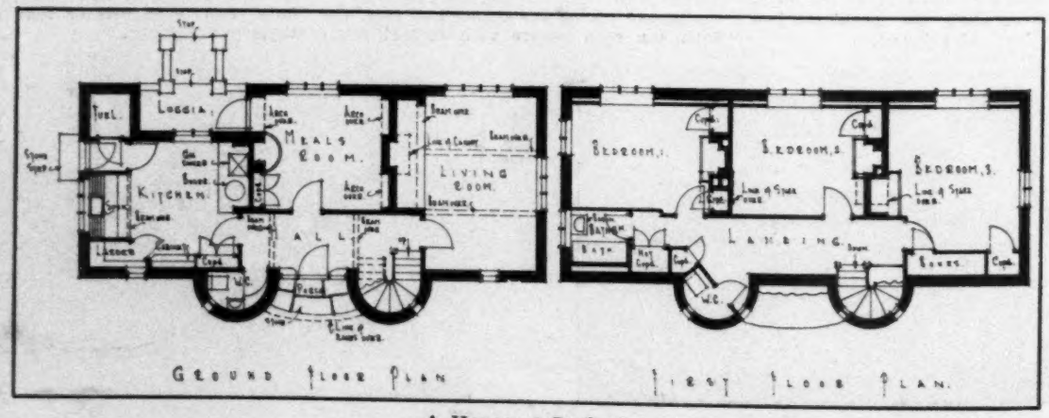
"Presumably the City Fathers had in mind a gesture emphasising the importance of Sheffield and its industries to the country and the world; that is to say, that most of the money (as doubtless a very small proportion would be required to meet the necessities of accommodation and so forth) was to be spent very largely on publicity. One would expect, therefore, to find a city hall illustrating the industrial activity of the city, and, with Sheffield's resources of steel and other such industries, it was peculiarly fortunate in having at hand the means of a unique accomplishment. It might well have had a glistening all-steel structure demonstrating to the uttermost limit the variety and adaptability of its own manufactures.

"What a contrast between that idea and the actual achievement! As built, this city hall would equally fit any other city. It suggests little of the industries of Sheffield. It is reminiscent of a bygone stone age, entirely contrary to the spirit on which Sheffield must either proceed or die. In a world of which this building is a reminder, Sheffield would have no place, and would return to whatever degree of oblivion it possessed before the present era. . . .

"I write this in no spirit of criticism of the work as carried out, but only in doubt as to the wisdom of the underlying principles. It may well illustrate a prevalent weakness of our time of being very clever in doing things wrongly."

We take the following extracts from *The Times* editorial comment:—"The new City Hall is built (so far as the eye can see) of stone. And Sheffield is not Bath nor Portland. It neither quarries nor sells stone. It is a city of steel; and its City Hall should have had the hall-mark, should have been, like the Ghost in 'Hamlet,' 'in complete steel'—so patently built of steel that one glimpse of it would have cried 'Sheffield for Steel' as loud and clear as a whole twelvemonth of full-page advertisements in newspapers and an endless relay of the largest and brightest sort of posters in the most prominent situations of town and country. It seems strange indeed that so happy a notion was not hit upon long ago. Doubtless the Venetian glass industry (if it existed then at all) was not sufficiently developed to make the first Palace of the Doges a Crystal Palace; and succeeding centuries merely went on altering it on the old unimaginative lines. But the next English town that wants a town hall will surely not make the mistake that Sheffield has made. Stoke-upon-Trent, or one of the other four, could do something very chaste and glossy in earthenware. . . . Northampton could prove to the world that there is nothing like leather . . . and when Edinburgh at last decides what it is going to build on Calton Hill, there can be no hesitation in declaring the proper material to be rock.

"Should the Sheffield City Council dare to excuse itself, it might not unreasonably take a humble tone—state how many tons of Sheffield steel there are concealed in the new hall, and plead, like the March Hare with 'the best butter,' that the stone, though it may be in the wrong place, is very good stone from the adjacent county of Derby, and (according to our Architectural Correspondent) of assistance to that 'effect of masculinity which becomes a Northern city.' But it is not altogether impossible that the Council will take a higher line, and will protest that even in Sheffield, man cannot live by steel alone. They may remind the world that theirs is an ancient city with a long and august history; that Sheffield has made her contribution to and maintains her share in the succession of cultural developments — Mediæval, Renaissance, Augustan, and what not—which have made England; that she has no desire to cut adrift from all but a single element in that many-sided and richly endowed past. . . . that her life in the present and her ambition for the future are by no means confined to a single manifestation of her power and her vitality. . . . And they might go on to observe that Sheffield is not only a certain town in Yorkshire, Eng., where they make steel, but also an important member of a loose but vast association of all the climes, all the civilisations, all the commerce, all the arts, and all the thought of two hemispheres. . . ."



A House at Seaford.

Mr. Alwyn Underdown, F.R.I.B.A., Architect.

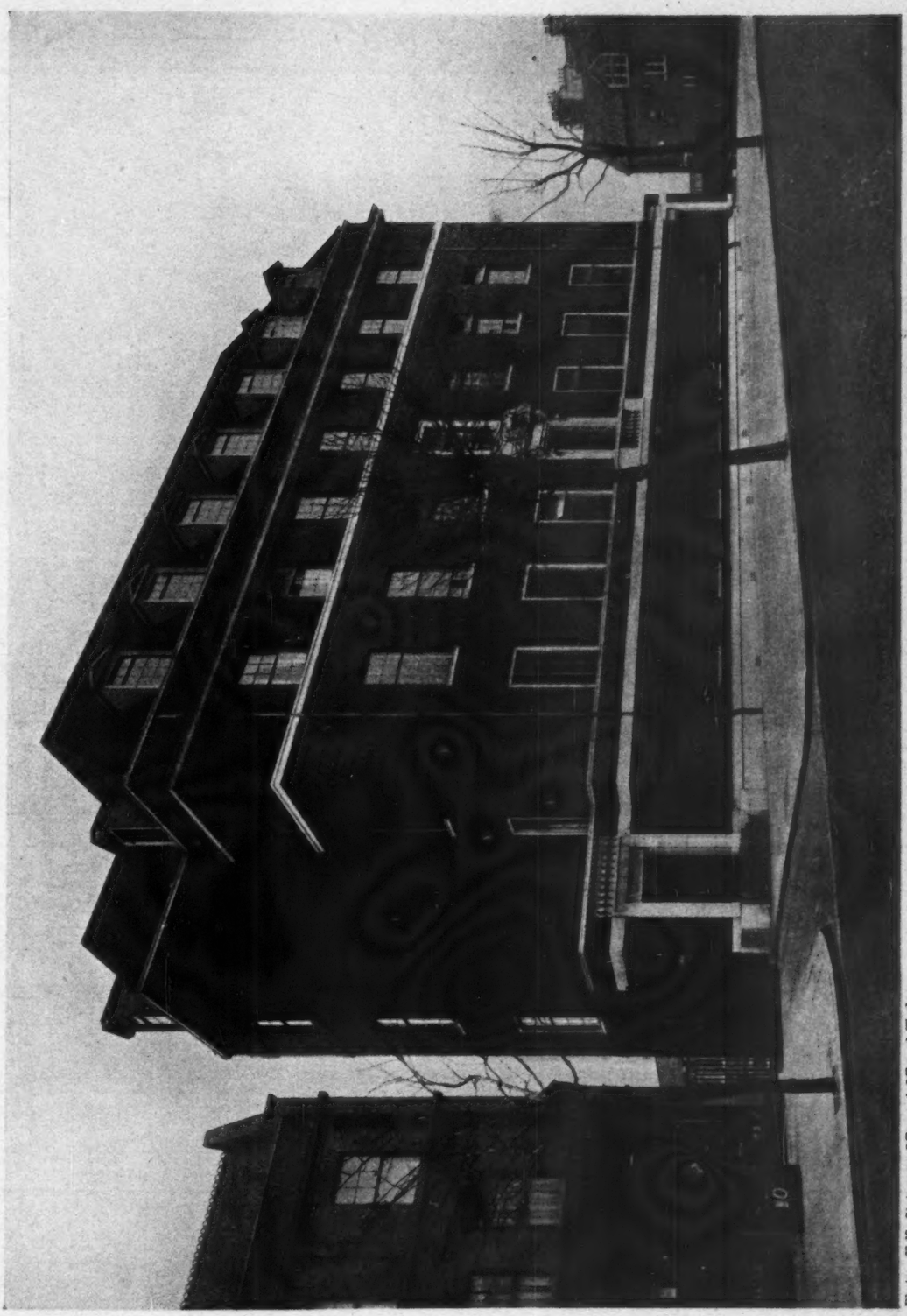
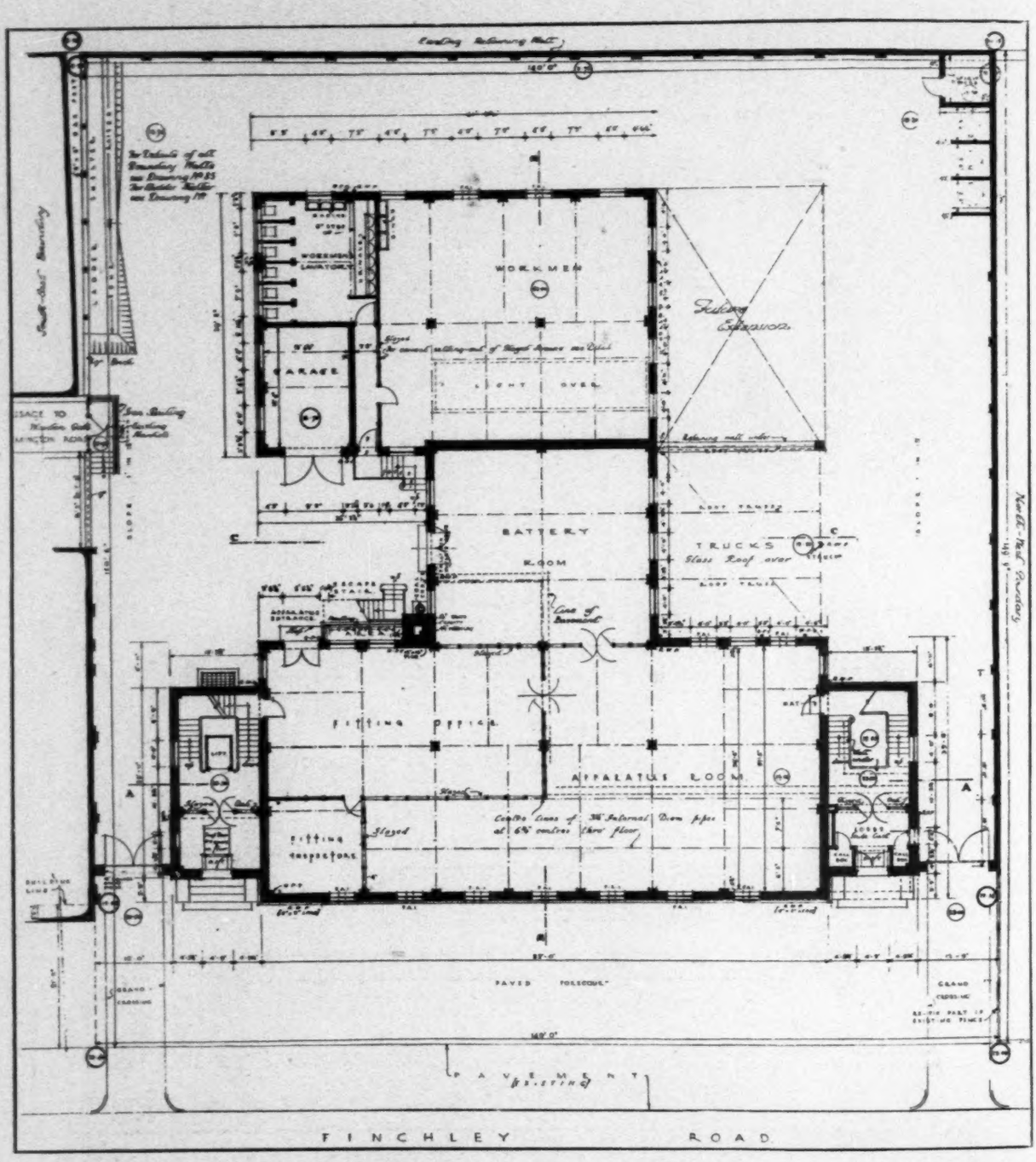


Photo: H.M. Stationery Office and Office of Works.

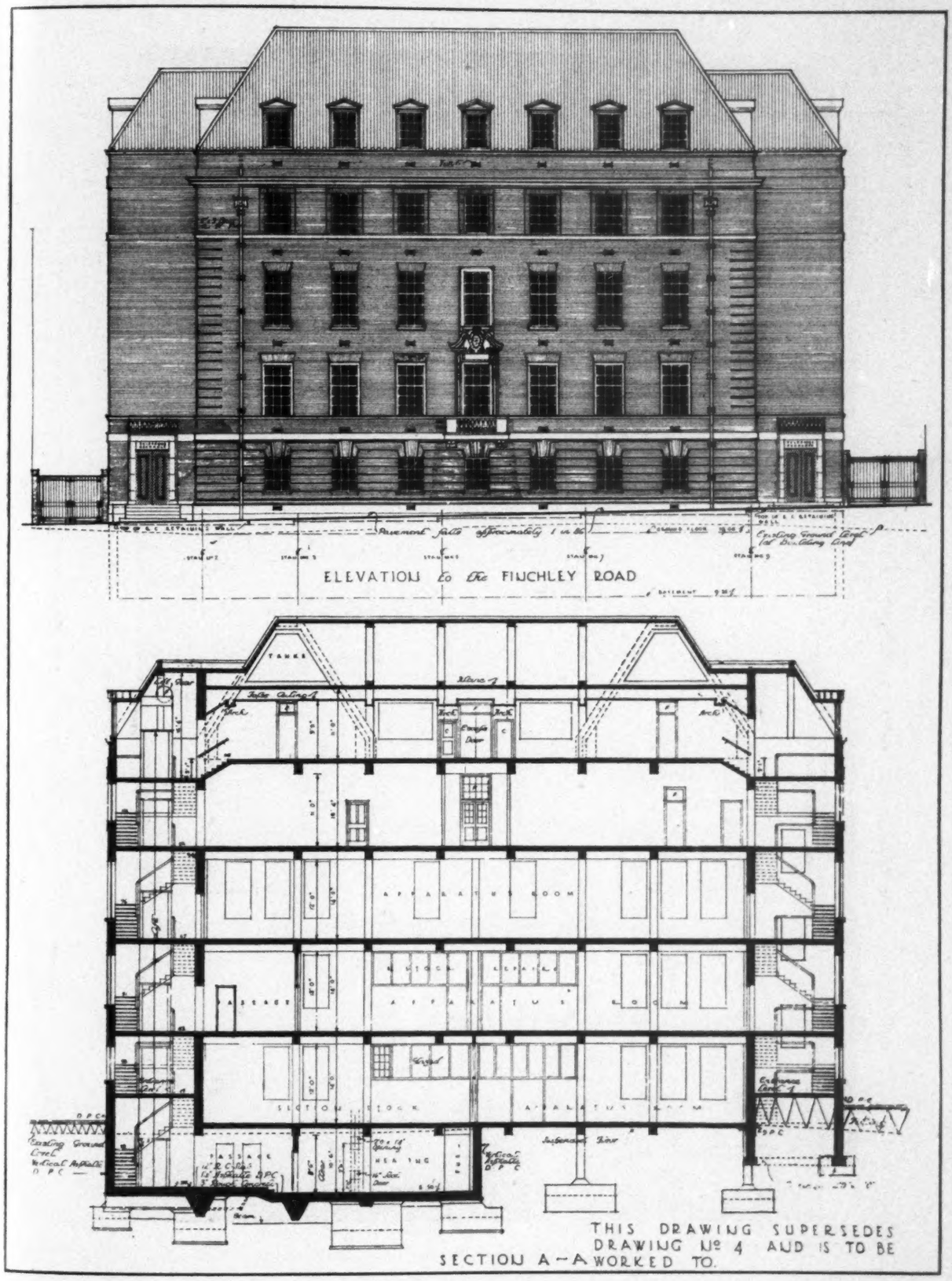
Hampstead Telephone Exchange.

MR. CHRISTOPHER BRISTOW, A.R.I.B.A. (H.M. Office of Works), Architect.



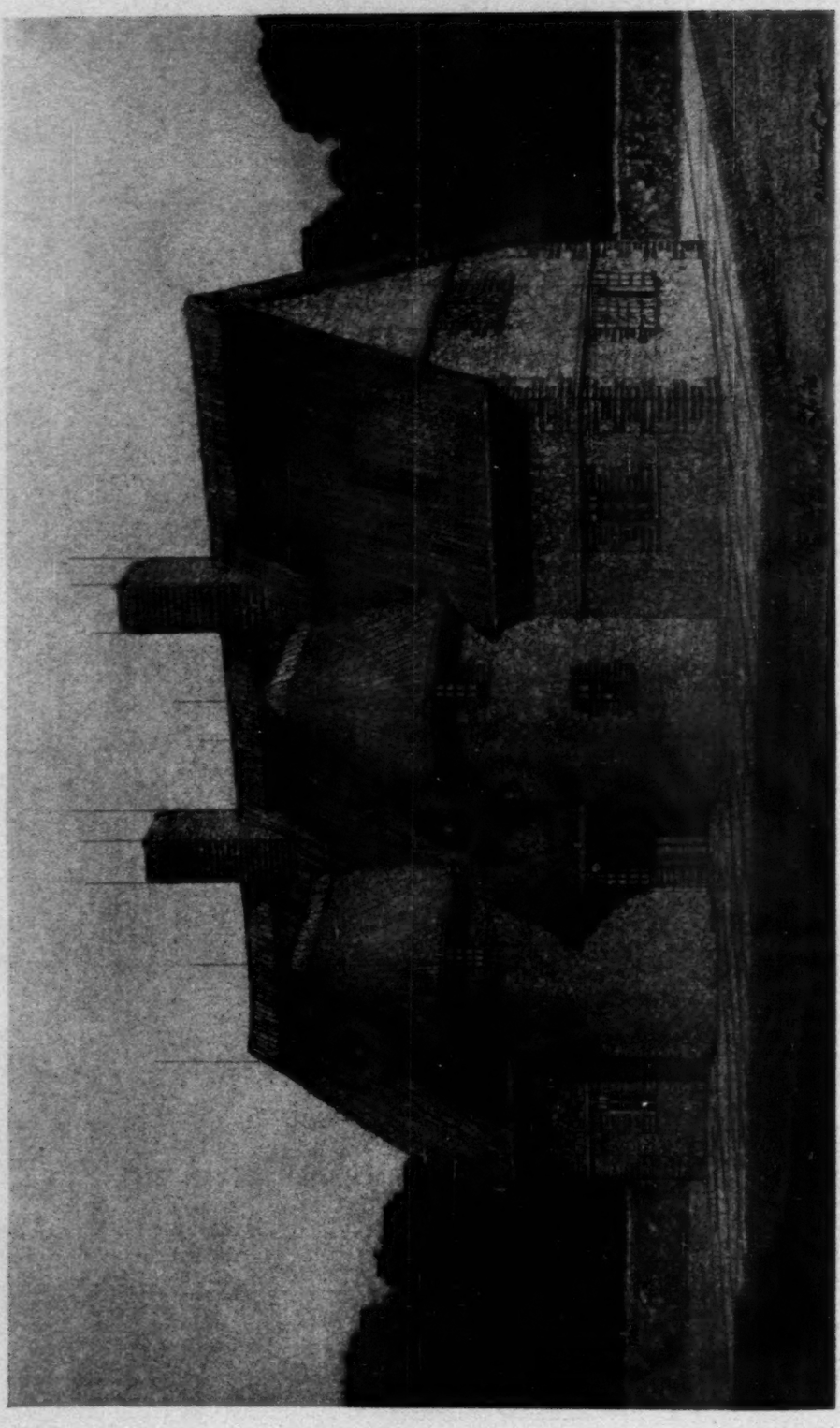
Hampstead Telephone Exchange: Ground-floor Plan.

MR. CHRISTOPHER BRISTOW, A.R.I.B.A. (H.M. Office of Works), Architect.


ELEVATION to the FINCHLEY ROAD
TANKS
APPARATUS ROOM
SECTION A–A
THIS DRAWING SUPERSEDES DRAWING No 4 AND IS TO BE WORKED TO.

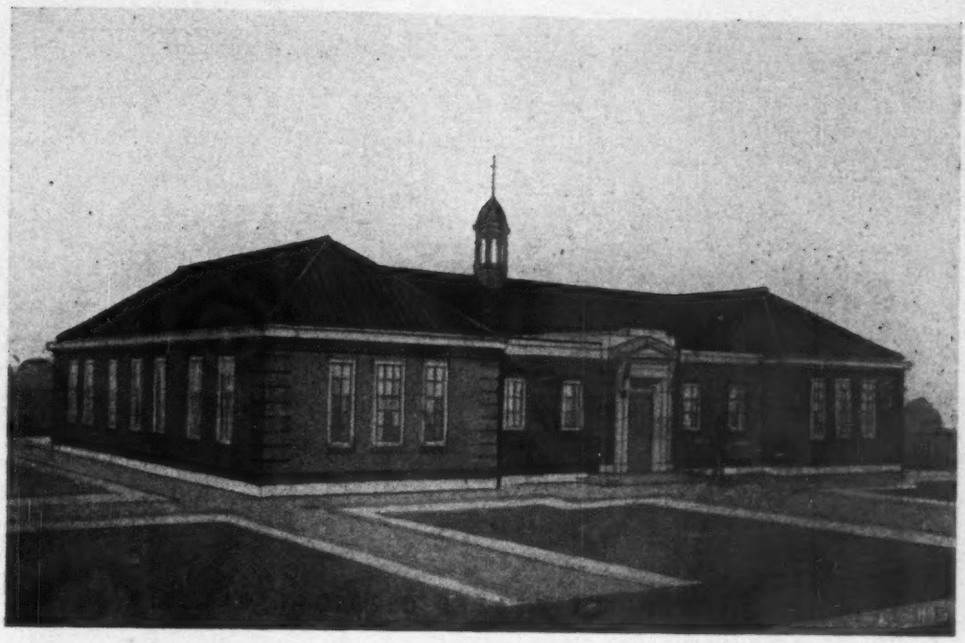
Hampstead Telephone Exchange.

MR. CHRISTOPHER BRISTOW, A.R.I.B.A. (H.M. Office of Works), Architect.

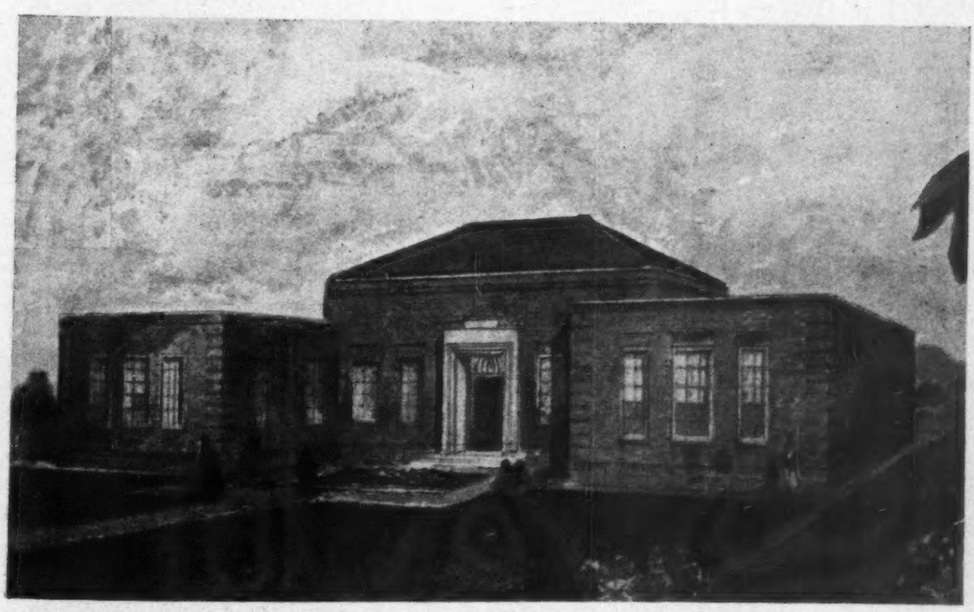


A House at Seaford.

MR. ALWYN UNDERDOWN, F.R.I.B.A., Architect.



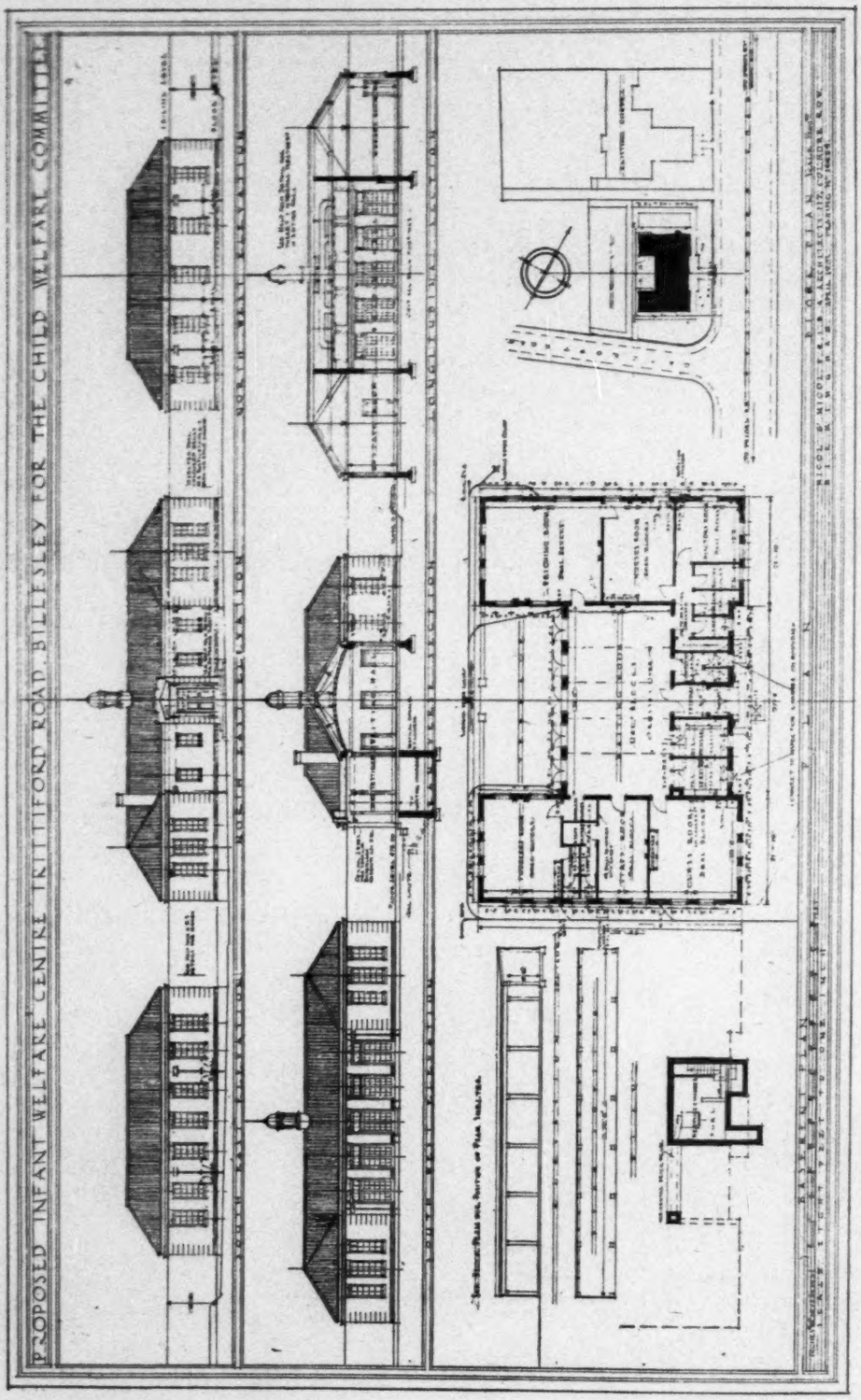
BILLESLEY.



KINGSTANDING.

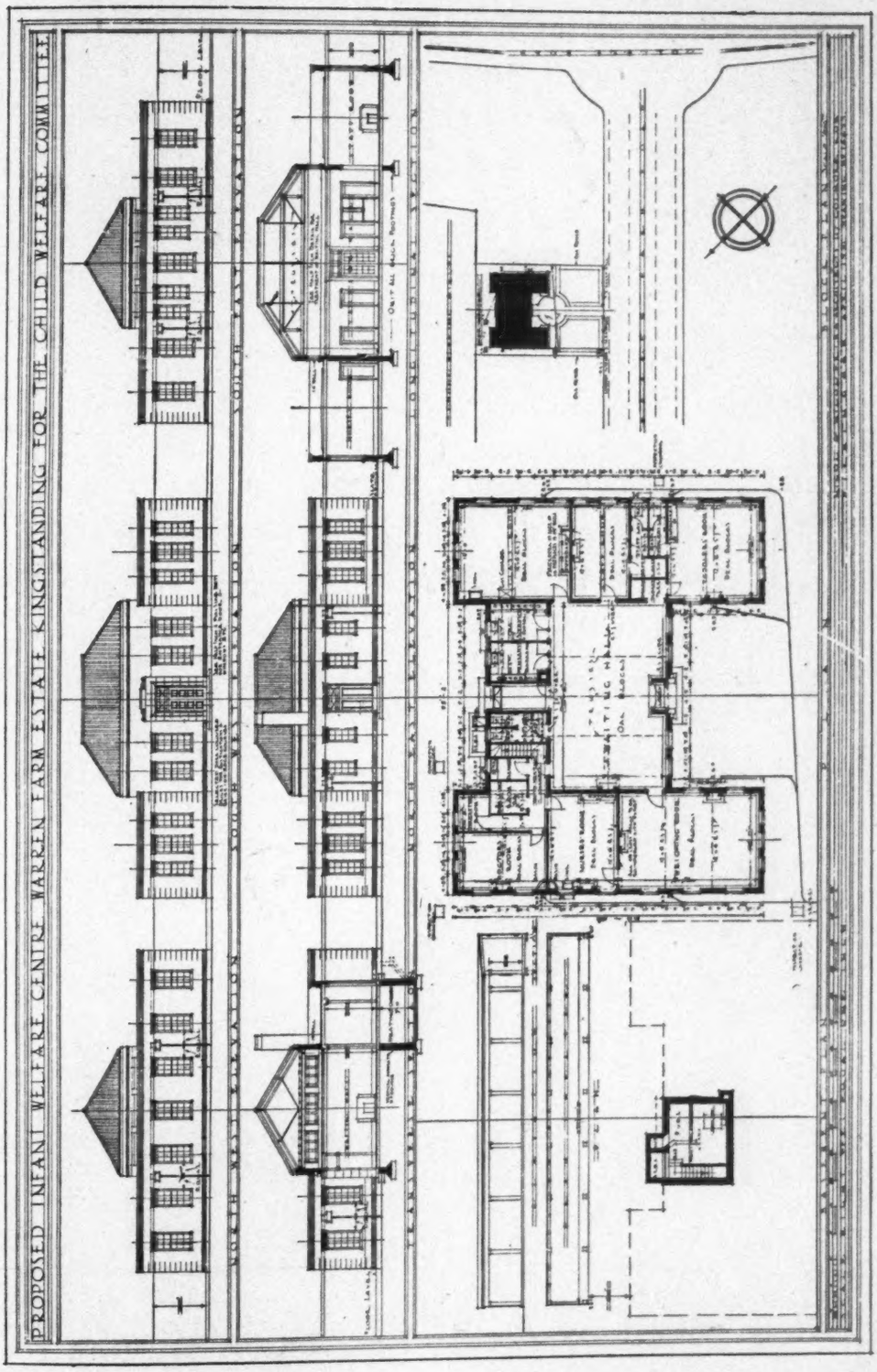
Infant Welfare Centres, Birmingham.

MESSRS. NICOL AND NICOL, FF.R.I.B.A., Architects.



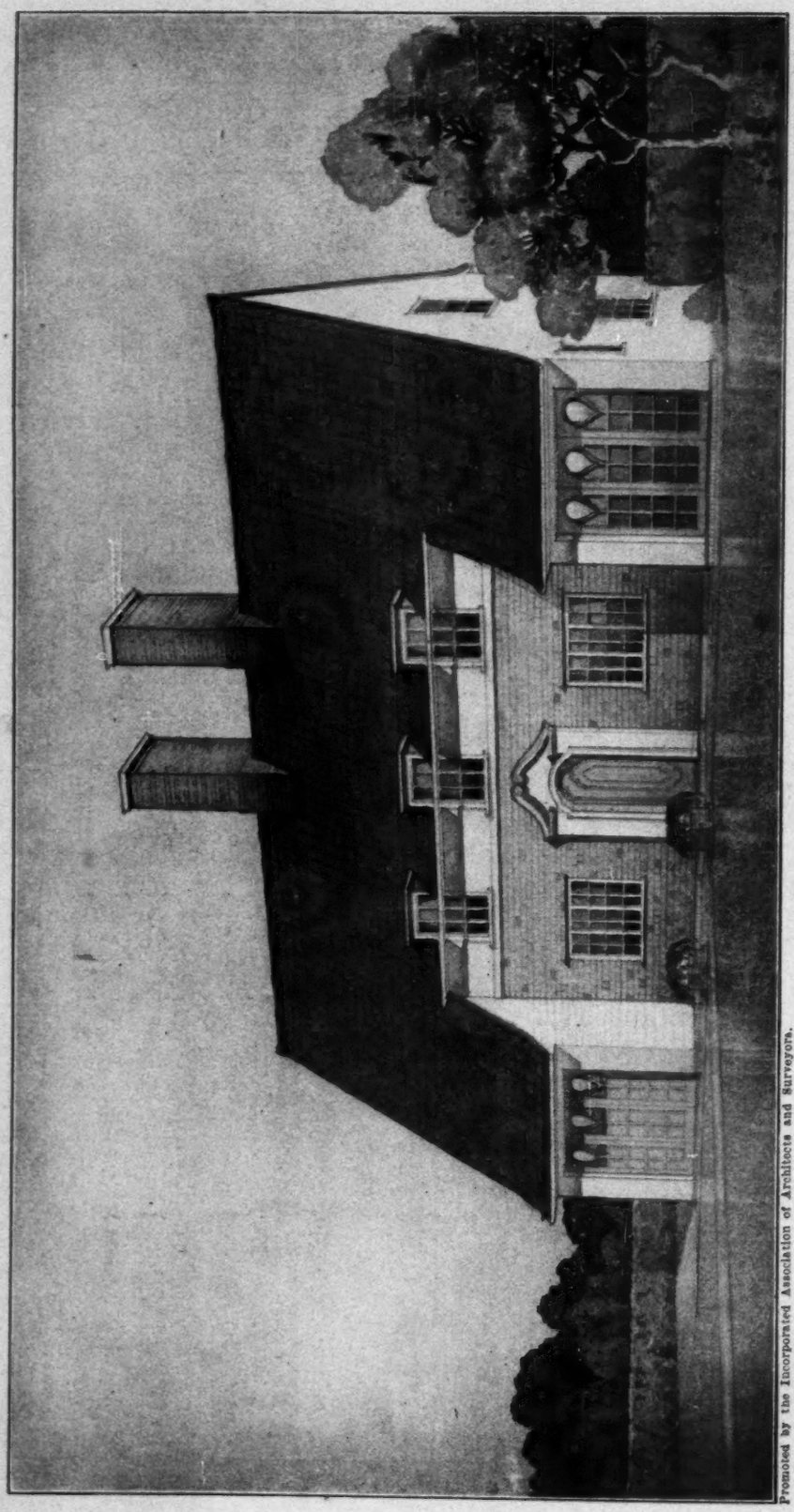
Infant Welfare Centre, Billesley, Birmingham.

Messrs. Nicol and Nicol, FF.R.I.B.A., Architects.



Infant Welfare Centre, Kingstanding, Birmingham.

Messrs. Nicol and Nicol, FF.R.I.B.A., Architects.



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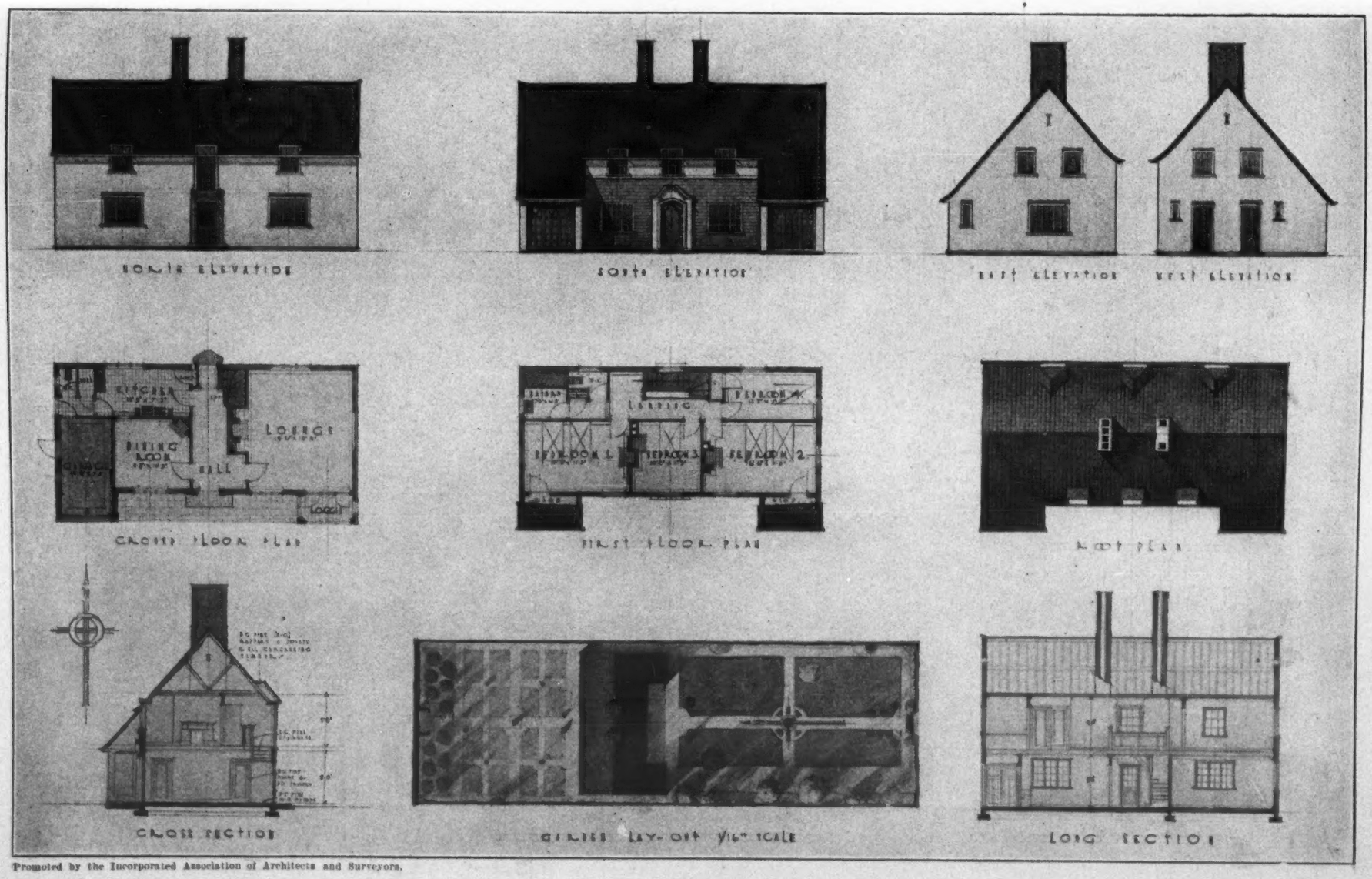
£1,000 All-British House Competition: First Premiated Design.

By Mr. Edward H. Banks.



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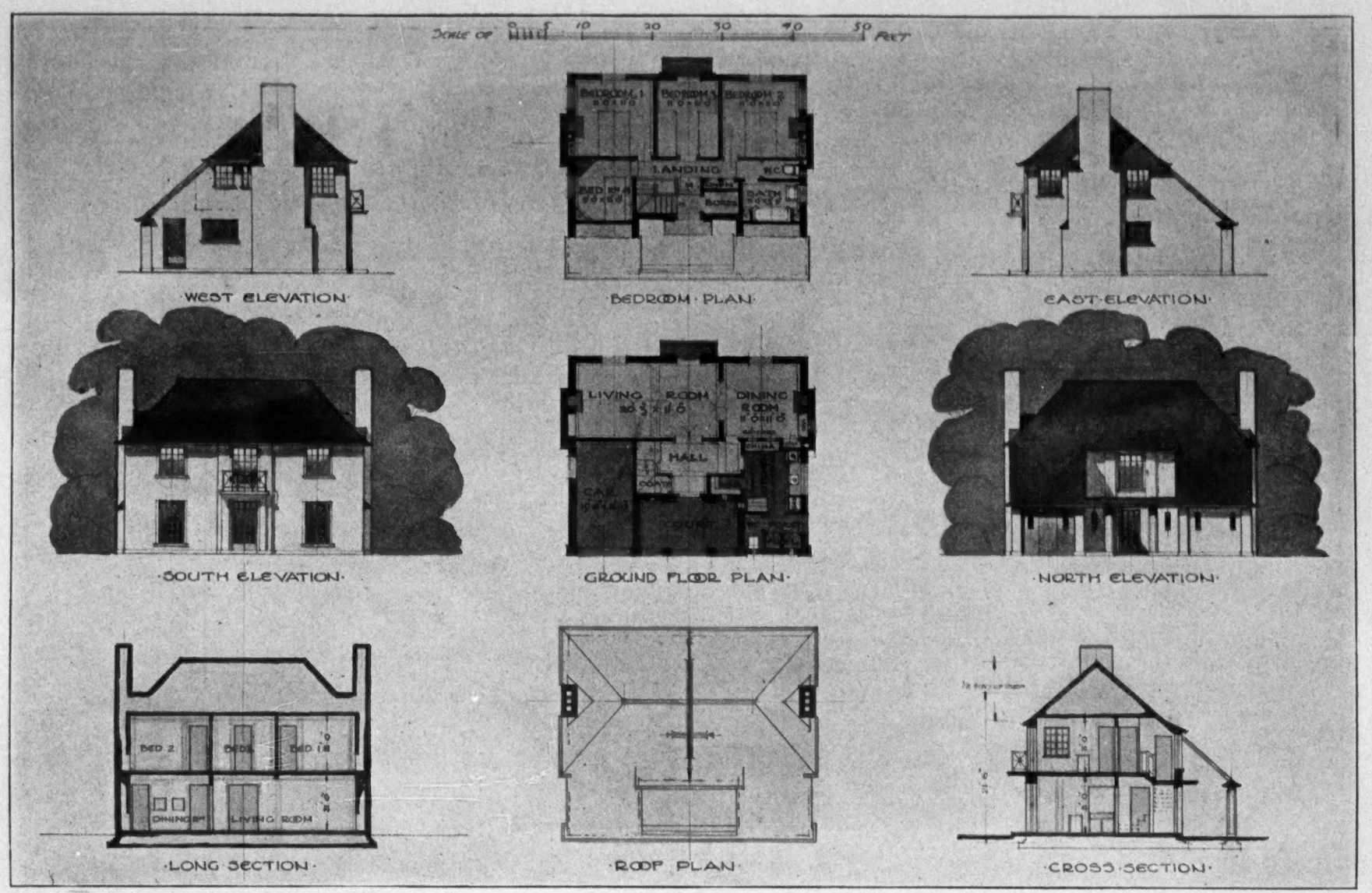

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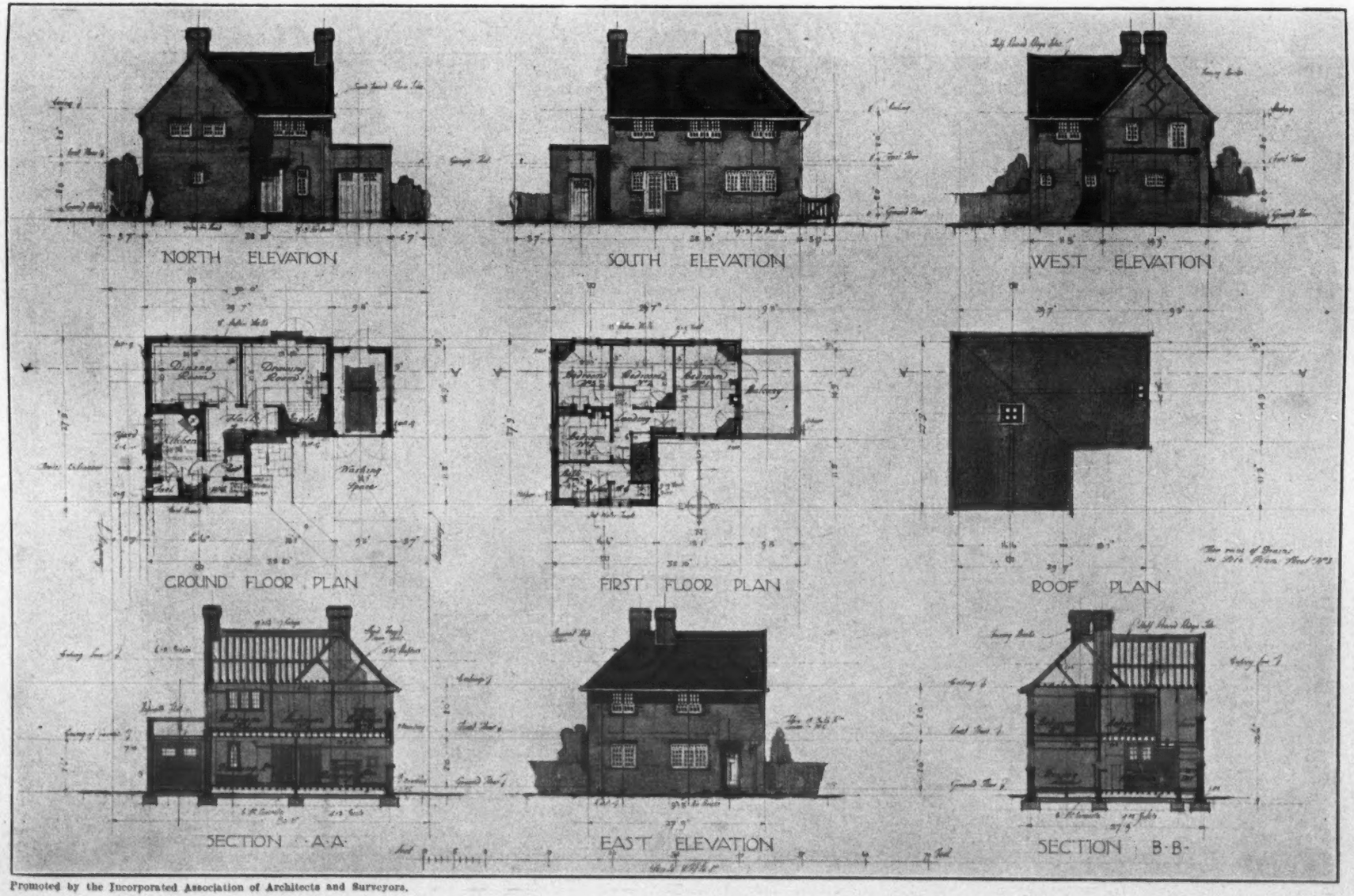

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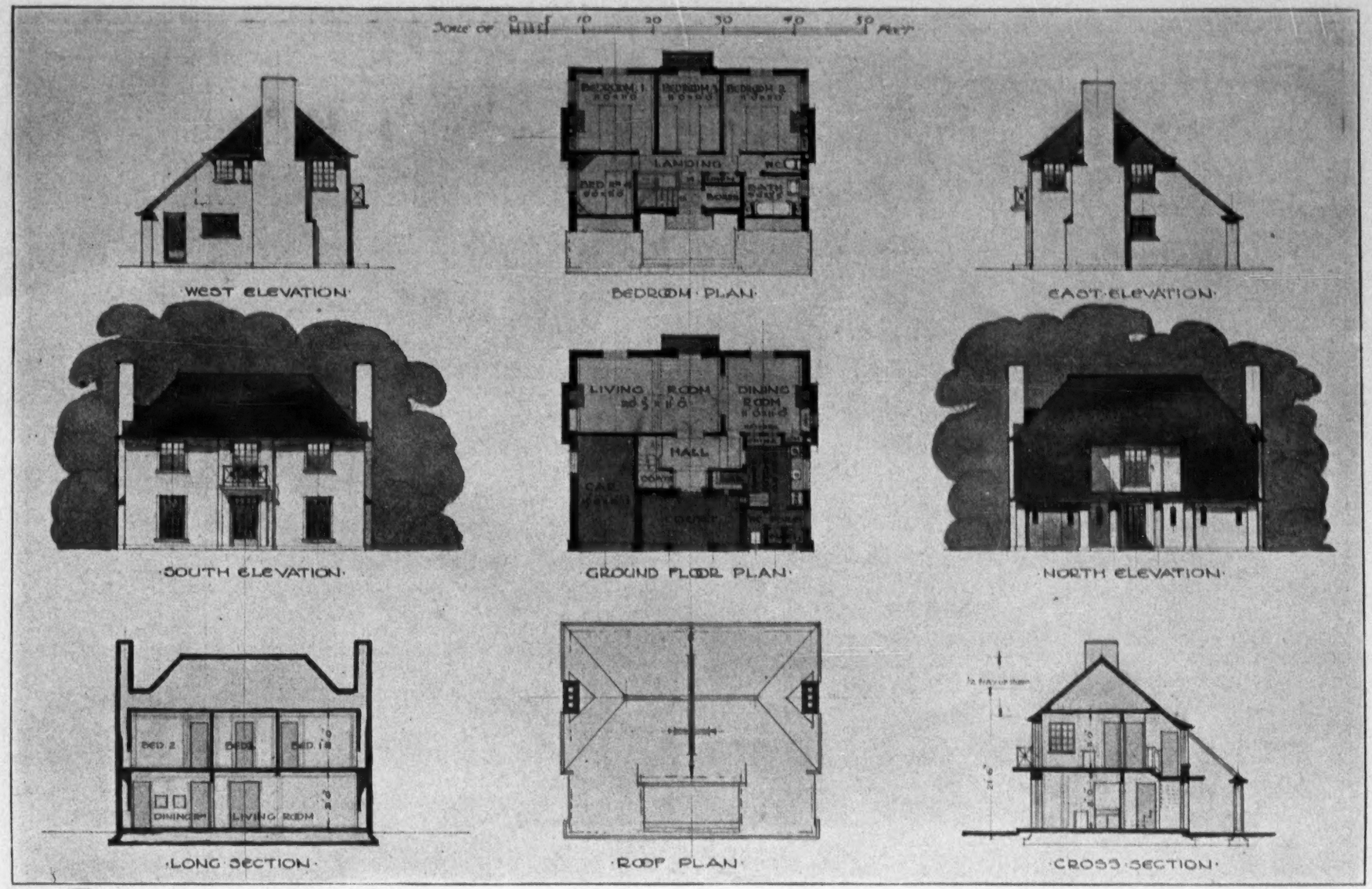

Promoted by the Incorporated Association of Architects and Surveyors.

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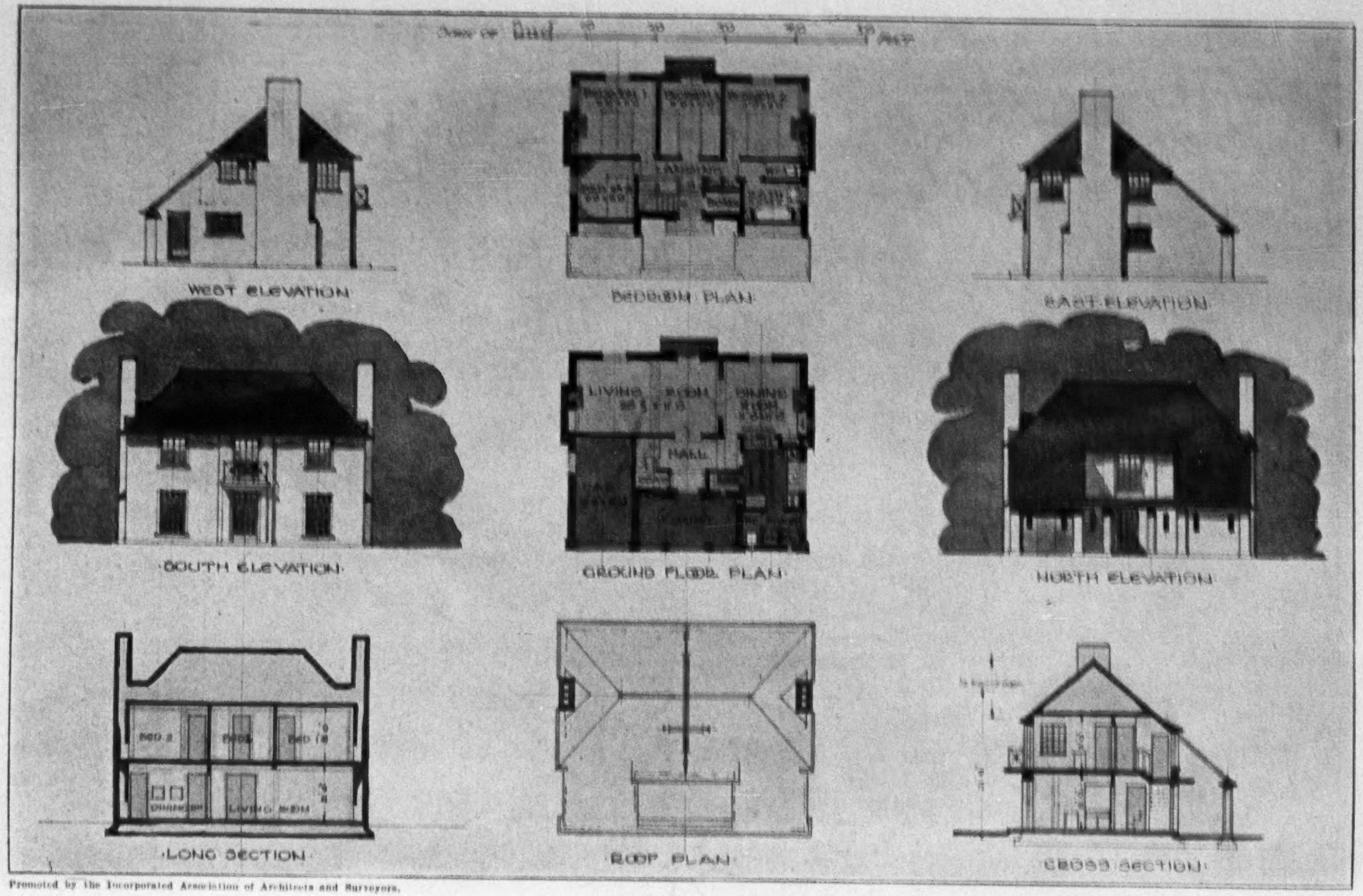
Cottages at Burnham Market, Norfolk.

Mr. H. East, F.F.A.S., Housing Architect to the Docking R.D.C.



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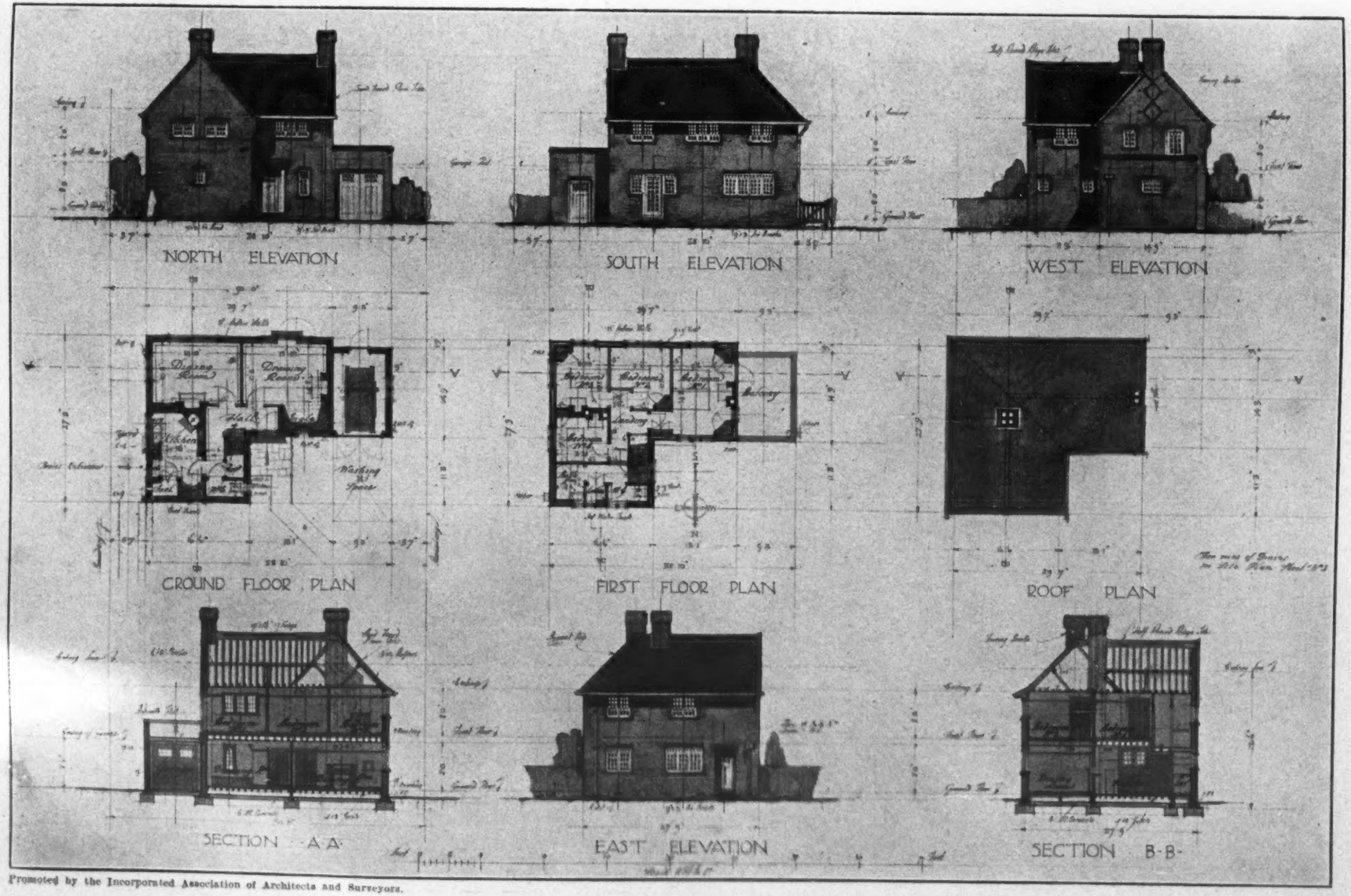

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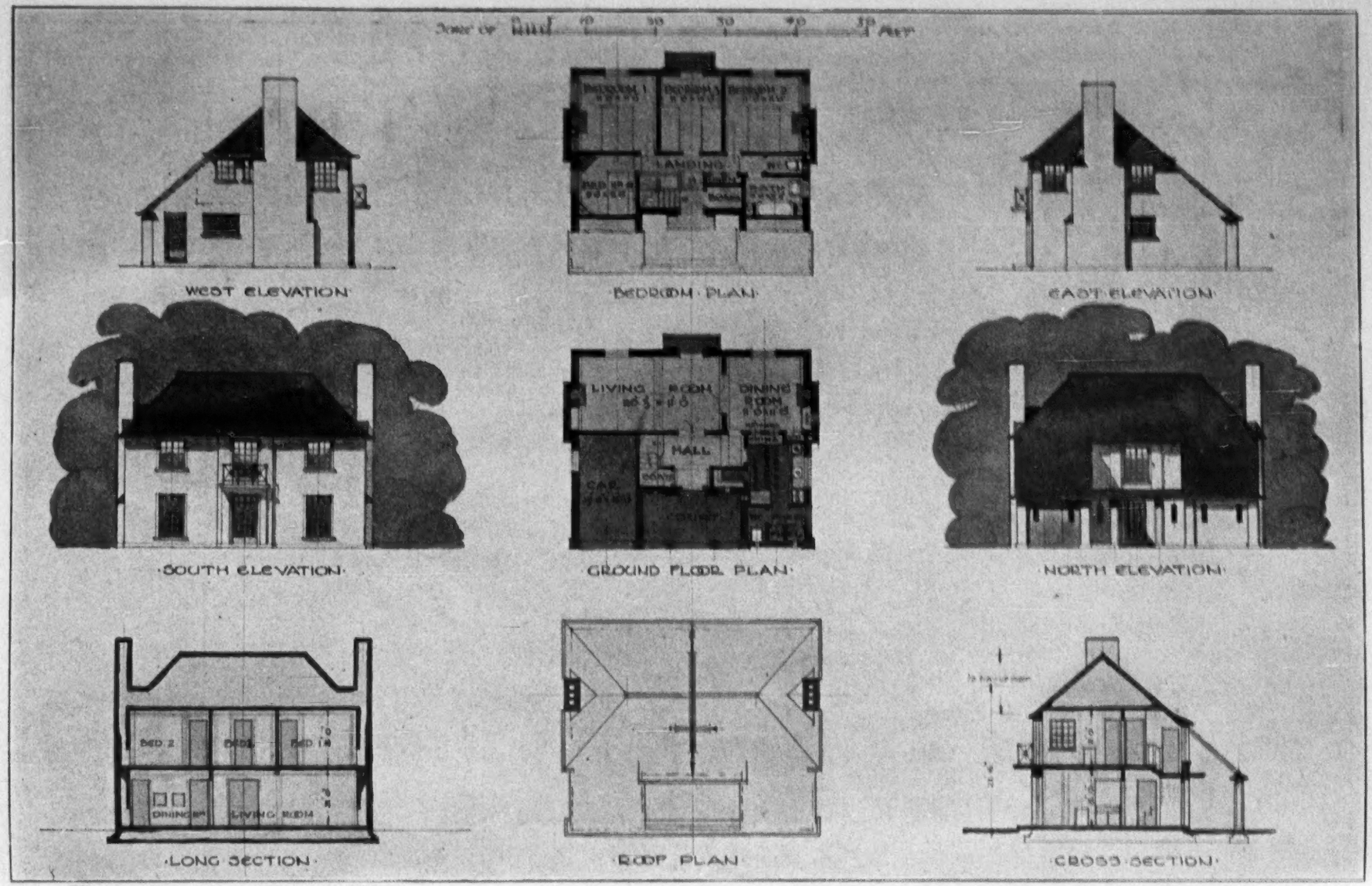

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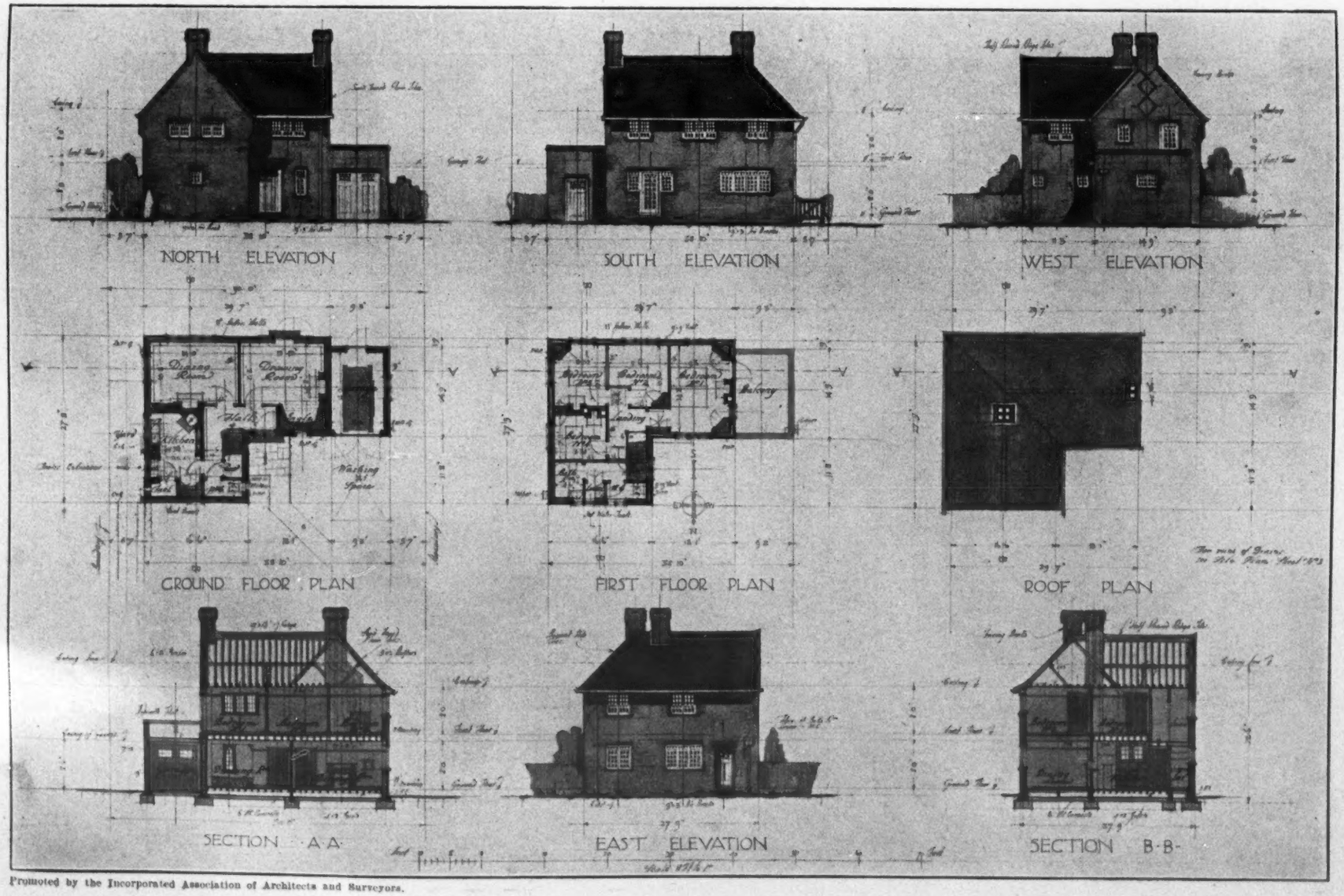

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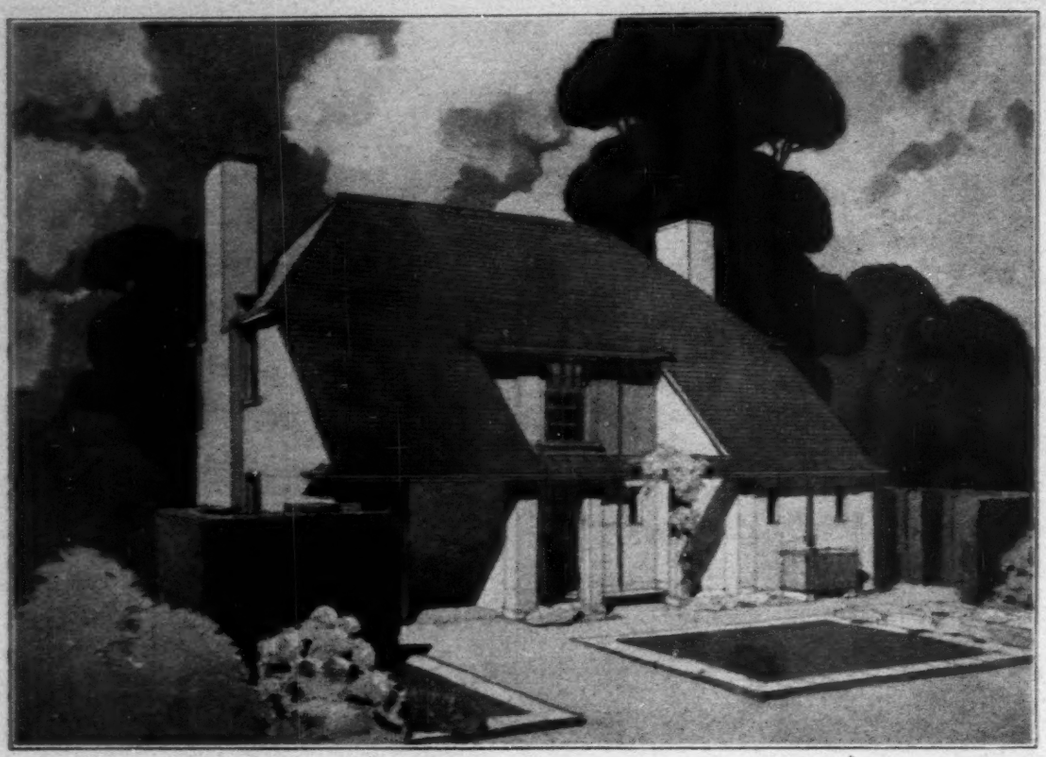
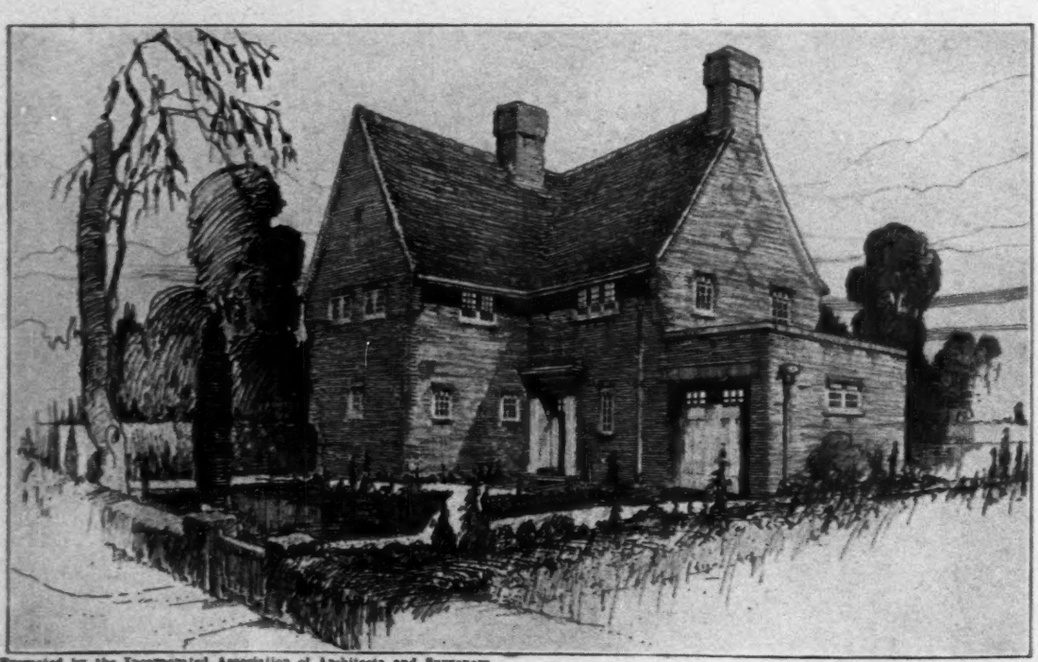


PERSPECTIVE OF SECOND PREMIATED DESIGN.

BY MESSRS. GODMAN AND KAY.



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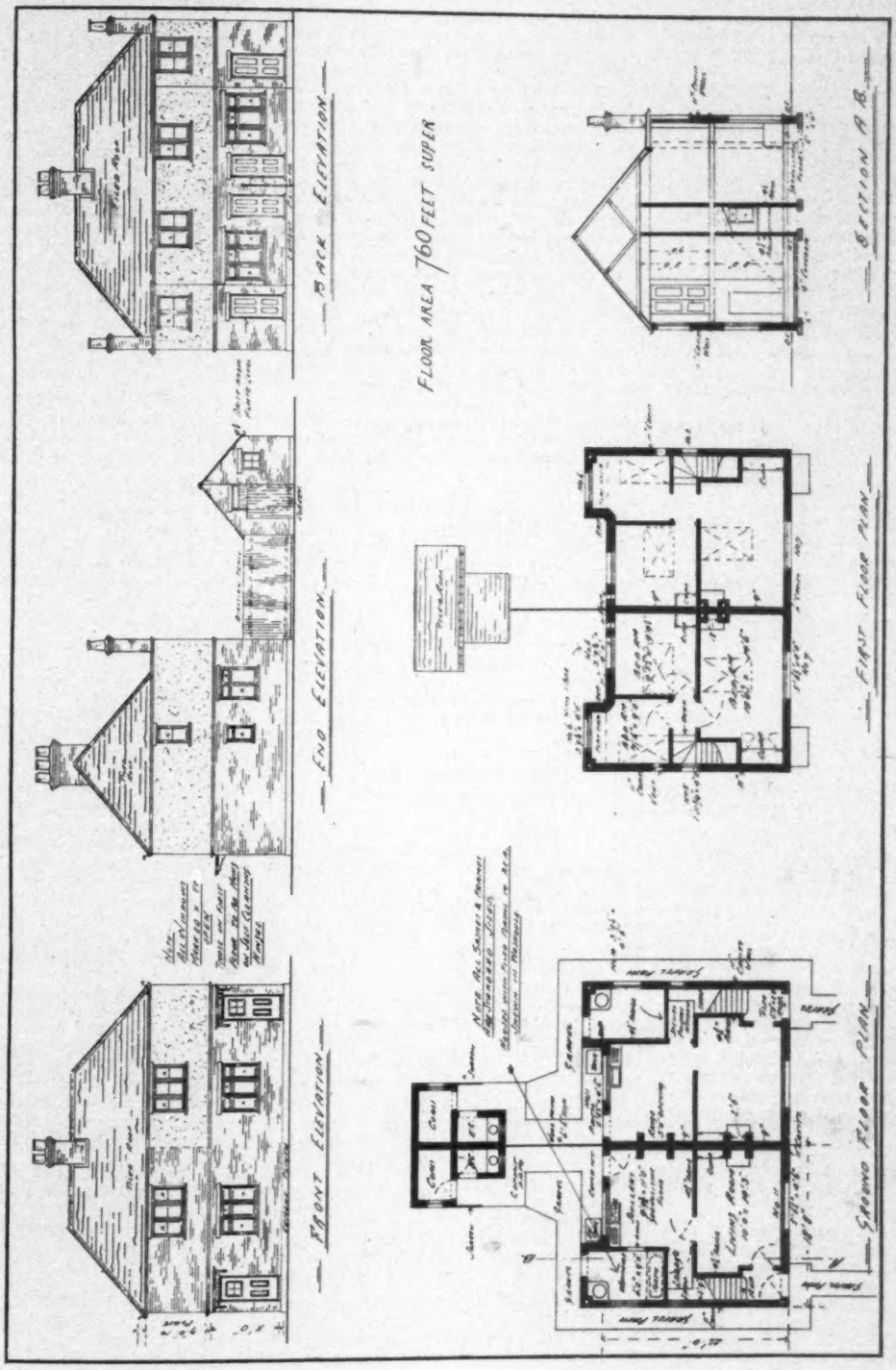
PERSPECTIVE OF THIRD PREMIATED DESIGN.

BY MESSRS ROSE AND ABRAM.

£1,000 All-British House Competition.



Cottages at Burnham Market, Norfolk.

Mr. H. East, F.F.A.S., Housing Architect to the Docking R.D.C.

UNEMPLOYMENT IN THE BUILDING INDUSTRY

BUILDING INDUSTRIES' CONFERENCE MEMORANDUM.

The following memorandum for submission to the committee appointed by the local authorities to co-operate with His Majesty's Government in a review of local expenditure presented by the Building Industries' Conference, convened by Sir Raymond Unwin, P.R.I.B.A., has just been issued :—

I.—Introduction.

The Conference, which represents all the interests connected with the building and constructional group of industries, is deeply alarmed at the grave unemployment position which has arisen in the building and allied industries since the Government and local authorities launched their economy campaign in September, 1931, and urgently appeals to the Local Government Enquiry Committee to include in its deliberations careful consideration to the following matters :—

(i) The fundamental position of the building industry in relation to the national welfare.

(ii) The present extent of unemployment in the building industry.

(iii) The economic effects of increasing unemployment in the building industry.

(iv) The potentialities of the building industry in the rehabilitation of national prosperity.

With regard to (i) the importance of the building and public works industry is demonstrated by the following facts, supported by the information set out hereafter in this document :—

(a) It is the largest directly-employing industry in the country. With subsidiary industries directly dependent, it determines the employment or otherwise of at least two million male workers. This takes no account of the large number of professional workers engaged in the industry.

(b) Approximately 80 per cent. of the total cost of its products is disbursed through the medium of weekly wages. It develops the largest weekly circulation of money of any single industry.

(c) The wages and salaries disbursed by the industry are almost wholly expended on the basic necessities of life. The raw materials are almost entirely obtained from, and manufactured in, this country. It, therefore, provides a large proportion of the home market for the basic industries of the country which, without such an assured home market, are handicapped in the development of their export trade.

(d) Inasmuch as its products are, in the main, the basis of the rateable value of the country, it produces and maintains more stable and rateable wealth than any other form of commercial activity, and is constantly providing new sources of public revenue.

(e) It creates a demand for the products of a greater number of ancillary industries, and to a greater extent, than any other single industry.

With regard to (ii) unemployment in this industry has increased from a total of 255,192 in September, 1931 (representing 14.9 per cent. of the total number of insured workpeople) to 339,889 in July, 1932 (representing 18.2 per cent. of the total number of insured workpeople). On July 25, 1932, easily the largest percentage of "wholly unemployed males" was in the building and public works group—viz., 18.1 per cent. of the whole total of unemployed insured male workers. No other industry has suffered anything approaching such a diminution in the number of operatives employed.

With regard to (iii), the effect of increasing unemployment in the building industry has been :—

(a) To increase the public charge in respect of Unemployment benefits by amounts varying from 20s. 3d. to 27s. 3d. per week per male worker rendered unemployed. This expenditure is totally unproductive.

(b) To deprive the general trade of the country of the advantages which would otherwise accrue from the circulation of money in the form of weekly wages.

(c) To increase the cost of administration falling upon the country (including the local authorities) with respect to Unemployment Insurance, Poor Law and General Social Services.

With regard to (iv) it may be mentioned that the building industry is now so organised as to be able to produce in the most efficient manner, and in consequence at lower costs than at any time since the War. To this end it has instituted most effective machinery for regulation of industrial relations (viz., the National Joint Council for the Building Industry); it has made full use of new inventions; it has instituted methods of standardisation; and it is doing notable pioneer work in the direction of planned co-ordination of all the manifold activities associated with the industry. There is ample authority for urging that any activity in the building industry would quickly radiate throughout the whole of British industry.

II.—The Fundamental Position in Relation to the National Welfare.

Attention may at once be drawn to the statistical data set out in the appendix hereto, from which the following deductions are drawn :—

From Table A.

Building, public works contracting and constructional engineering are responsible for the employment of the largest number of male workers in any industrial group—namely, 1,145,890, as compared with 1,136,530 in the "distributive trades"; 1,041,120 in coal mining; 734,480 in agriculture, Great Britain only; and 528,910 in general engineering.

Even taking into account female workers, the group is responsible for the greatest numbers of workers (1,158,380) of all industrial groups except the "distributive trades" (a wide grouping, with 1,874,780). The next highest totals are :—Coal-mining, 1,046,870; agriculture (Great Britain), 857,214; general engineering, 576,380; cotton textiles, 550,110.

From Table B.

Subsidiary industries directly and almost entirely dependent upon building and public works employ a further 407,170. This figure should be added to the number of those for whose employment the industrial group mentioned in Table A is responsible—giving a total of 1,158,380 plus 407,170, or 1,565,550.

From Table C.

Other industries directly, and to a substantial extent, though not entirely, dependent upon building and public works activities employ 166,340.

From Table D

Other industries indirectly affected to a substantial degree by activity in building and public works employ 722,840.

From Table E.

Other industries, for example, transport (rail and road), gas, water, electricity, etc., which employ upwards of 2,022,920 workpeople, are indirectly affected to an extent which cannot be gauged. Further, the coal industry derives considerable benefit from the building materials industries, as will be seen from the fact that the brick industry alone, when engaged on normal production, consumes approximately 2,500,000 tons of coal per annum, and for every 1,000,000 tons of structural steel manufactured, 3,500,000 tons of coal are consumed

At a conservative estimate, therefore, it may be deduced that the employment or otherwise of at least two million workers is determined by the degree of activity in the building and public works group of industries.

III.—Present Extent of Unemployment in the Building Industries.

According to the tables on page 301 of the *Ministry of Labour Gazette* for August, 1932, on July 25, 1932, the number of "wholly unemployed males" in the building and public works groups was 351,606, representing 27.6 per cent. of building workers and 42.5 per cent. of workers on public works.

It will be seen that easily the largest percentage of wholly unemployed males in any single group is in the building and public works group—viz., 18.1 per cent. of the whole total. Next in order were :—Mining, 13.2; transport and communication, 9.6; distributive trades, 8.5; engineering, 8.4; shipbuilding and repairing, 5.9. No other group exceeded 4.1 per cent. It must be remembered that unemployment of male workers is generally of more serious import than that of female workers—both socially and financially—because their families are also affected and the unemployment benefits and/or public assistance requirements are correspondingly larger. The gravity of the situation is reflected by the fact that these figures occur at the height of the normal building "season." What the situation will become when the winter months arrive, and the industry suffers its great seasonal decline, can hardly be contemplated with equanimity.

Further Deductions.

An examination of the industries affected will demonstrate that activity in building and public works can have no adverse effect on the balance of the country's international trade. The raw materials are practically all derived from Great Britain, and its products (except for a few constructional projects in the Dominions and Colonies) are for the greater efficiency of British industrial and public life. Very little money passes out of the country.

On the contrary, activity in building and public works means greater activity in a large number of important British industries. The maintenance of the home demand for the products of several of the more important manufacturing and exporting industries, *e.g.*, iron and steel, glass, bolts, nuts, screws, rivets, nails, metal manufactures, manufactures of motors, cranes, hoists, and other machinery—should be of assistance to those industries in the process of reorganising to cope with competition in foreign markets. The severe curtailment of such a home demand may render reorganisation more difficult, if not impossible.

It therefore seems clear (1) that no more effective step could be taken in reducing unemployment and assisting a revival of industry than by encouraging constructional activity; (2) that, in view of the cost of unemployment benefit and the fact that constructional activity involves no export of capital, the financial justification for encouraging such activity is sound.

IV.—Economic Effects of Increasing Unemployment in the Building Industry.

The products of the building industry which, as before mentioned, are derived almost entirely from raw materials occurring in this country, are worked up, transported and assembled in this country by processes involving local manual labour to a greater extent than any other industrial activity except agriculture.

In a first analysis it may be said that, on an average, each £100 spent on building or constructional projects includes about £40 paid out to building trades workers, £45 to £50 devoted to the purchase of materials, and from £10 to £15 devoted to overhead costs (which also include remuneration of various kinds). A further analysis will reveal that of the £45 to £50 devoted to the purchase of materials, probably from £35 to £40 is paid out in wages to workers in the manufacturing, producing and transport industries. Here, again, the balance remain-

ing for overhead costs will include remuneration payments of various kinds.

Thus it will appear that of each £100 spent on building or constructional projects, over £80 is generally devoted to payment of earned remuneration—either as wages in the building or the manufacturing trades or in transport or in salaries. This proportion of the money expended is thus kept in circulation and constitutes a substantial part of the purchasing power upon which the manufacturing and exporting industries have to rely for their fundamentally important home market. Little harm, and much good, could accrue to the body politic from keeping this money in circulation, even if the projects themselves were not highly profitable, but merely in the nature of useful amenities. In point of fact, there is enormous scope for constructional activities which would constitute much more than mere amenities and would, indeed, create new wealth and, therefore, new sources of public revenue.

It is instructive to examine, moreover, the likely results of a policy of deliberate and drastic retrenchment in building and constructional work. The average wage or salary for the various types of work may be taken as £3 per week, and it has to be recognised that the average building worker has a wife and one, two or three children. The conclusion is inevitable that, instead of the £3 wage, from 20s. 3d. to 27s. 3d. is paid from public funds in the form of unemployment insurance benefits and public assistance, this latter amount being completely unproductive but largely representing a charge upon industries generally. In other words, the net result of refraining from an expenditure of £100 upon justifiable building or constructional projects is to withdraw £80 of wage-payments (which would have created new wealth) and to substitute two-fifths of that amount (£32) as unproductive payments at the expense of industries generally.

For every £1,000,000 of building or constructional work abandoned, the State or local authorities will be called upon to bear an unproductive expenditure of £375,000 in unemployment benefits and public assistance, while a further £425,000 is withdrawn from the purchasing power of the wage earners. From the point of view of taxpayers and ratepayers (whose prosperity is, after all, largely dependent upon the prosperity of industries generally) the results of over-drastic retrenchment in this sphere are thus most unprofitable. Every pound "saved" means that they must pay out 7s. 6d. at once for "doles" and public assistance; that a further 8s. 6d. has been withdrawn from the purchasing power which would have bought their products and that the wealth which would have been created, and which would have brought some collective return, is non-existent.

Moreover it must not be forgotten that the crippling of constructional development must have a substantial effect in reducing the revenue.

There is even a greater danger. The "creeping paralysis" of the building industry is of a type which might have far-reaching effects upon the social structure as a whole. The personnel of the building and constructional group of industries is almost entirely masculine, and are evenly spread throughout the country. Together with their families, the workers in this industry form a considerable proportion of the whole population. They have hitherto acted as a steadying influence upon the industrial population in their own localities. The building industry, however, is peculiarly susceptible to the cumulative or "snowball" type of depression. To envisage the extreme case, the total cessation of building work would mean that more than two million adult male workers would be thrown out of employment, and that (having regard to their families) the purchasing power of eight million persons would be much reduced, with very great repercussions upon local commerce and local industries. It is important to prevent this "snowball" process from gathering momentum.

V.—Potentialities of Activity in the Building Industry as a Means of Rehabilitation.

On the other hand, there is good authority for contending that an essential factor in the general rehabilitation of this country is a revival of constructional activity. It is perhaps permissible to refer, in passing, to the very different policy which has been adopted in the United States, where "reconstruction" has been recognised to depend substantially upon activity in the constructional industries. Reference may be made, also, to the pronouncement of some forty distinguished members of the faculties of Economics at our Universities—published in the form of a letter to *The Times* of July 5, 1932. In their letter the following occurs :—

> "Private individuals and institutions can assist by spending according to their capacity. In cases of doubt, the patriotic motive should weigh on the side of expenditure rather than economy.
>
> "The Government is at the heart of the economic system, and its operations have far-reaching effects for good and evil. . . . It should encourage departments, local authorities, etc., to speed up their expenditure on all sound schemes of construction and development. The Government should obtain funds for these purposes from the banks, which will thus be assisted in their efforts to put fresh money into circulation.
>
> "To secure confidence and allay possible anxieties, the Government should explicitly declare its policy in advance."

This united pronouncement is the more notable because the economists concerned are of different schools of political thought. Similarly, Sir Arthur Salter, whose impartial authority in such matters must bear great weight, has written :—

> "The building trade is always a key-point in the economic structure, and any improvement *there* would quickly radiate."

It is submitted that H.M. Government would be well advised to give most careful attention, on the one hand, to the evils of exaggerated retrenchment, and, on the other hand, to the possibilities of advancing towards rehabilitation of the whole industrial and economic structure by means of discriminating encouragement of constructional enterprises.

APPENDIX.

TABLE A.—NUMBERS OF WORKPEOPLE INSURED IN THE INDUSTRIES OF BUILDING, PUBLIC WORKS CONTRACTING AND CONSTRUCTIONAL ENGINEERING.

(Figures taken from pages 299 to 301, "Ministry of Labour Gazette," August, 1932, as at the last computation, July, 1931, and they cover "Great Britain and Northern Ireland.")

	Males.	Females.	
Building... ...	848,250	9,920	858,170
Public Works Contracting ...	269,330	1,300	270,630
Constructional Engineering ...	28,310	1,270	29,580
	1,145,890	12,490	1,158,380

Note.—For purposes of comparison the following figures are given to indicate the corresponding numbers insured in the other chief and prominent industries (also at July, 1931) :—

"Distributive Trades" ... ... (of which 1,136,530 are males)	1,874,780
Coal Mining ... ... (of which 1,041,120 are males)	1,046,870
General Engineering... ... ... (of which 528,910 are males)	576,380
Cotton Textiles	550,110
Motor Vehicles, Cycles and Aircraft	251,320
Woollen and Worsted	238,870
Shipbuilding and Repairing ...	195,390
Steel Melting and Iron Puddling, Iron and Steel Rolling and Forging	169,350
Boots, Shoes, Slippers and Clogs...	137,840
Chemicals	98,940
Linen	78,210
Silk Manufacture and Artificial Silk Weaving	45,020

Agriculture is not an insured industry, but the latest figures published are in the "Annual Agricultural Statistics" of the Ministry of Agriculture and of the Department of Agriculture for Scotland (see page 32 of the Twentieth Abstract of Labour Statistics, Cmd. 3831, of March, 1931). They cover Great Britain only—not Northern Ireland.

The figures are :—

Great Britain.	Males.	Females.
Regular Workers ...	645,014	83,926
Casuals	89,466	38,808
	734,480	122,734
Total Agricultural Workers ...		857,214

TABLE B.—NUMBERS OF WORKPEOPLE INSURED IN INDUSTRIES DIRECTLY AND ALMOST ENTIRELY DEPENDENT UPON BUILDING AND PUBLIC WORKS ACTIVITIES.

(Figures taken from pages 299 to 301, "Ministry of Labour Gazette," August, 1932.)

Brick, Tile, Pipe, etc., Making ...	87,620
Stove, Grate, Pipe, etc., Iron Founding (distinct from Engineers' Iron Founding)	92,440
Sawmilling and Machined Woodwork	57,120
Stone Quarrying and Mining ...	46,430
Electrical Wiring and Contracting ...	22,460
Paint, Varnish, Red and White Leads	20,510
Artificial Stone and Concrete ...	19,630
Cement, Lime-Kilns and Whiting ...	17,920
Clay, Sand, Gravel and Chalk Pits...	17,020
Slate Quarrying and Mining	10,350
Heating and Ventilating Apparatus	9,170
Wall-Paper Making	6,500
Total	407,170

(Directly and almost entirely dependent.)

TABLE C.—NUMBERS OF WORKPEOPLE INSURED IN INDUSTRIES DEPENDENT TO A SUBSTANTIAL EXTENT, AND DIRECTLY (THOUGH NOT ENTIRELY) UPON BUILDING AND PUBLIC WORKS ACTIVITIES.

(Figures taken from pages 299 to 301, "Ministry of Labour Gazette," August, 1932.)

Glass (excluding Bottles and Scientific Glass)	27,470
Brass, Copper, Zinc, Tin, Lead, etc., Manufactures	38,190
Wire, Wire Netting, Wire Ropes ...	22,770
Bolts, Nuts, Screws, Rivets, Nails, etc.	26,250
Brass, and Allied Metal Wares ...	27,600
Woodworking not separately specified	24,060
Total ...	166,340

(Dependent directly and to a substantial extent.)

TABLE D.—NUMBERS OF WORKPEOPLE IN INDUSTRIES INDIRECTLY AFFECTED TO A SUBSTANTIAL DEGREE BY ACTIVITY IN BUILDING AND PUBLIC WORKS.

(Figures taken from pages 24 and 25, "Ministry of Labour Gazette," January, 1932.)

Industry.	Connection with Building and Construction.	
Steel Melting and Iron Puddling. Iron and Steel Rolling and Forging.	Steelwork (for Steel-framed buildings, Rolled Steel Joists, etc.); Steelwork for Bridges, etc.	169,350
Electrical Engineering.	(*a*) Services for new buildings and works; (*b*) Expansion dependent upon preliminary works of a public works character	92,470
Electric Cables, Wires and Lamps.	(*a*) Supplies for new buildings and works. (*b*) Cable-laying dependent upon preliminary works	108,340

Table D Continued.

Industry.	Connection with Building and Construction.	
Hand Tools, Cutlery, Saws, Files.	A large part of the demand for hand tools, saws and files is found in the building and allied trades.	34,580
Pottery, Earthenware, etc.	Earthenware Pipes, Sanitary Glazed Ware ...	78,710
Furniture Making.	New Buildings provide a large part of the demand for furniture ...	132,020
Rubber ...	Roofs and Floors ...	67,330
Carpets ...	New Buildings provide a large part of the demand	26,290
Oilcloth, Linoleum, etc.	... ...	13,750
	Total	722,840

(Indirectly affected to a substantial degree.)

TABLE E.—INDUSTRIES AFFECTED BY BUILDING AND PUBLIC WORKS ACTIVITIES INDIRECTLY, AND TO AN EXTENT WHICH CANNOT BE GAUGED.

	Number of Workpeople Insured.
Metal Industries not separately specified	206,330
Construction and Repair of Vehicles	251,320
Gas, Water and Electricity Supply Industries	175,870
Railway Service	140,020
Road Transport (other than Tramway and Omnibus)	206,390
Lead, Tin and Copper Mining ...	4,870
*Coal Mining	1,041,120
	2,022,920

* The building materials industries make a very important contribution to employment in the British coal industry; for instance, the brick industry alone, when on normal production, consumes approximately 2,500,000 tons of British coal per annum.

MOISTURE AND MATERIALS.—II

IN the previous article it was pointed out how the exposure of certain materials (cement and timber were particularly instanced) to conditions of varying atmospheric humidity caused distinct changes to take place in strength and size. It may be taken as generally true that since by far the greater proportion of building materials are included in the class which has been termed quasi-solids or gels (a piece of "dry" glue may be taken as typical of the class) moisture affects them all to a greater or lesser degree and in a manner depending upon the actual material and structure of the substance. Glue soaked in water takes up moisture, and in doing so increases in size. Shrinkage occurs on drying. A similar effect is obtained with concrete, and although the greatest amount of contraction occurs in the early stages of the original drying-out, the shrinkage continues for a considerable time. It is for this reason that it is of extreme importance to retard the drying so that the strength of the concrete is fully developed and able to withstand, without cracking, the large stresses set up. The moisture changes which may occur later set up stresses in the material, but these the concrete is usually strong enough to resist without fracture.

With certain substances used as aggregate or filler (and this applies also to other preparations of somewhat similar nature, *e.g.*, jointless flooring material) damp is especially troublesome. Sawdust and other timber waste is frequently used, and, as with ordinary timber construction, considerable swelling occurs with wetting, resulting in complete failure either in wall, block or floor.

Happy the man who can build on rock! Many are the ideas on the safe bearing of various foundation materials, and strange, indeed, the ways of clay and sand. The frequency with which shoring and underpinning are required over clayey foundations indicates our general lack of knowledge in this important subject. The effect of abnormally dry weather in drying out moisture from clay and producing shrinkage and irregular subsidence, or abnormally wet weather in increasing the tendency to slide, especially on slopes, invariably produce their crop of troubles.

In addition to the change of size produced by moisture absorption, there is the well-known effect due to frost. One is astonished at the number of men occupying responsible positions in the building industry as employed or employers who do not realise the fact of the expansion of water on becoming ice. The 9 per cent. expansion on *freezing* besides causing the bursting of water pipes, undoubtedly causes some breaking down of porous materials. If pore spaces in stones are completely filled with water and then freezing takes place (commencing from the external face where the pore space is open), disruption is likely. Similar action may take place in other materials which become thoroughly soaked, *e.g.*, roofing tiles. Should the pore cavity be only partially filled (say, nine-tenths or less) there will still be room for the necessary expansion to take place. This may be effected either by the incompleteness of the soaking or by evaporation after saturation. It will be noticed frequently that decay of stone takes place more readily on one elevation than on others, due to more complete saturation. Rain beating upon the stone may effect to a certain depth a high degree of saturation. To the south, and more particularly the south-west, the evaporation takes place more rapidly than in other directions, and so there is less likelihood of disruption when freezing occurs. The ratio of the normal amount of moisture which a stone will absorb, to the total which it is possible to make it absorb, *i.e.*, to fill its pore spaces, is termed the saturation coefficient, and this is considered to be one important indication of weathering power.

Chemical actions usually need moisture to enable them to take place at all or proceed very much more slowly in its absence, and there are certain chemical actions which have, directly or indirectly, extremely important effects on building materials. Rusting of iron, besides producing destruction of the iron itself, may, because of its association with other materials, cause even more damage. Structural steelwork must be efficiently protected. Reinforcing rods are in most cases safe from ordinary atmospheric influences, though instances often occur of their corrosion through breeze concrete or after some cracking has taken place in the concrete cover. The corrosion of galvanised-iron cisterns is an all too frequent cause of trouble, sometimes due to unsatisfactory galvanising, and often because of damage to the thin zinc coating by workmen's tools. Various semi-plastic compounds and also aluminium paint are used as additional protection, but care should be taken that the surface is thoroughly dry before application. Another effect is due to the increase in size on rusting. This, which everyone must have noticed, may cause damage by displacement of adjoining parts of the structure. A case is quoted of the shearing off of a wall by the rusting of iron beams used to support concrete slabs.

Atmospheric pollution is, as is well known, a great source of danger to materials. The sulphur in coal, on burning, becomes sulphur-dioxide, which pours out into the air of our cities and industrial centres. This sulphur-dioxide with water becomes sulphurous acid, which, on oxidation, becomes sulphuric acid (oil of vitriol),

$$\underset{\text{Sulphur-dioxide}}{SO_2} + \underset{\text{+ water gives}}{H_2O} = \underset{\text{sulphurous acid.}}{H_2SO_3}$$

Professor Church has stated that over 500,000 tons of sulphuric acid are produced in the atmosphere from coal burning in London annually. It is this acid which has such destructive action upon limestones, reacting with them to form calcium sulphate known under the common name of gypsum,

$$\underset{\text{Sulphuric acid}}{H_2SO_4} + \underset{\text{limestone}}{CaCO_3} = \underset{\text{calcium sulphate}}{CaSO_4} + \underset{\text{carbon dioxide}}{CO_2} + \underset{\text{+ water}}{H_2O}$$

Gypsum is somewhat soluble in water, and if it were washed away as soon as formed, *e.g.*, by rain or by actual washing by hose pipes, possibly very much less damage would be caused. The new substance formed occupies about 20 per cent. more space than the original salt and crystallises out either on the surface, doing little damage, or below the surface, where its disruptive effect is soon observed in the decay of relief carvings and the rounding of sharp arrises.

A similar phenomenon occurs in the well-known efflorescence on brickwork, and here again the crystallisation may be unsightly but harmless on the surface, or disruptive below the surface, causing disintegration of the brick or the lifting of cement stucco or plaster. These effects may be readily produced artificially by various salts, and the writer had an interesting case recently of this action with copper-sulphate. The salts producing efflorescence on brickwork are often derived from the bricks themselves, but may also come from external sources, *e.g.*, mortar or soil.

A defect with regard to which the writer has had a number of inquiries depends upon the development of cracks in brickwork or in rendering. Bricks are porous, and if exposed sufficiently long to driving rain or soaking water will allow moisture to percolate and appear on the other side. Where solid external walls are used, average weather allows moisture to evaporate from the outside after the soaking and before it has gone right through. Should the wall, however, have definite cracks, *e.g.*, at the junction with woodwork or in the stucco rendering, where moisture running down finds an easy inlet, much more water gets in than can evaporate from the wall face, or more particularly from the space through which it entered. This frequently shows itself as a damp patch on the internal wall face, may loosen the paint, if any, or may, if carrying salts, produce an efflorescence on the surface or loosen the plaster. The only really satisfactory remedy is to prevent inlet of water at these points, but relief may be sometimes obtained by using impervious material on the inner face.

With the more efficient use of concrete it is becoming increasingly common to regulate very carefully the quantity of water used in mixing. The ratio of water to cement has been demonstrated many times to be of the utmost importance in obtaining strong concrete. It is not so usually recognised, however, that sand, if exposed to the weather, contains a variable quantity of water which completely upsets any careful regulation of water-cement ratio unless it is specially allowed for. Two ways of doing this are by drying a sample of the sand and so determining the amount of moisture which it contains or by determining the amount of additional water required thoroughly to saturate the sand. An inert, non-porous (large) aggregate does not hold enough water to render any allowance necessary in any but very special cases, but care should be taken thoroughly to soak, before use, aggregate which is porous.

(*Concluded.*)

THE BUILDING EXHIBITION AT OLYMPIA

THE SCHOOLS' EXHIBITS.

By HUBERT LIDBETTER, F.R.I.B.A.

The interested and particularly the initiated visitor to an exhibition of students' work usually wonders, and not without good cause, how much is student and how much instructor. On reflection, any qualms which may qualify criticism should be allayed by the reflection that it is really only in the design and lay-out that the instructor's influence predominates. Anybody, student or craftsman, must and does assert his individuality when dealing with materials such as brick, stone, or wood, and, if the instructor is artist and craftsman as well as teacher, his influence, even if too marked, is all to the good in leading the pupil on the right lines and letting him follow only right design and method.

The schools' exhibits at the Building Trades' Exhibition show how splendidly the instructor is leading, and how equally praiseworthy are the efforts of the students in following on the right lines laid down. There are exceptions, of course, though probably those responsible are as well aware of their limitations as others, and are anxious to improve within the confines of their opportunities. Brickwork still follows the old lines of cut and rubbed arches, but there are good examples of freer treatments which augur well for the preservation of our own particular domestic architecture.

In the stonework we would wish for rather more full-size studies than the miniature stairs and domes, though this may be one of those items which are seriously hampered by limitations of cost and easy handling. The same may be said of the joinery, with perhaps less excuse. Here another criticism presents itself. When high attainment in craftsmanship is being striven for, none but the best material should be used, within reasonable limits, to interpret these efforts. Good joinery cannot be constructed with poor timber; or, conversely, poor timber cannot be made into good joinery, but can only tend to mediocrity.

Lead is a fascinating material—used in building for the highest and lowest purposes. It was a joy to see an award and prize to a length of lead pipe with beautiful curves and joints—a merely utilitarian article of the most exquisite craftsmanship. Here, again, the opening remarks apply to the rainwater heads and pipes—all of beautiful craftsmanship and most of good design, though a few of the poor designs could not hide the craftsmanship and high endeavour of the evidently enthusiastic student.

With one bright exception, the metalwork shown was uninspired and unimposing. It seems we must go to the country districts for the smithy and his arts. The metalwork of the Army Vocational Training Centre, however, should delight the heart of the pacifist by the evidence of the great skill of these young soldiers in turning their swords into ploughshares. The whole exhibit was a credit to the men and their instructors. It may seem invidious to pick out one exhibit for special mention when there were so many admirable collections, but this is a work we should all encourage and delight in.

The joy of the constructor is one of the greatest, and to instruct the future constructor is a high calling. It is the duty of all connected with the building trade to help and encourage these aspirants and their leaders, and, if we have little opportunity for helping materially, we can encourage and help by constructive criticism, which we hope will be taken in good part.

[A number of prizes presented by the Exhibition management, the City Companies and others have been awarded for brickwork, smithy work, masonry, plumbing, joinery, stands, and general exhibits. A complete list of the awards is given on page 578.]

CO-OPERATION IN AND WORK FOR THE INDUSTRY.

Last Saturday afternoon an official visit was paid to the Building Exhibition by members of the Association of Architects, Surveyors, and Technical Assistants, of the Sheffield and District Clerks of Works Association, and of the Incorporated British Institute of Certified Carpenters. The directors of the Exhibition entertained the visitors to tea, and an address was given by Mr. H. V. Lanchester, F.R.I.B.A.

Mr. C. McLachlan (President of the Association of Architects, Surveyors and Technical Assistants), in the course of some introductory remarks, referred to the amount of unemployment in the building trade. A year ago, he said, there had been much talk of equal sacrifice, but a very unequal burden had been put upon one industry, and there was in consequence a very large percentage of unemployment among architects and builders.

Mr. Lanchester said building was not to be regarded as a matter of the architect's office, but as one in which the co-operation of all concerned was necessary to achieve a good result, and it was always a happy thing to him to find that, alike in the workshop and in the drawing office, all were keen on getting a good building. This combination of all the industries in a building was not always completely understood in this country. He had just returned from a visit to Stockholm, where he had found an intimate relationship not only between the actual structural craftsmen and the architect, but between the architect and all those who were designing decorations, furniture, etc., for the building. Everything was worked out conjointly between the craft workers and the architect, whose job it was to reconcile the whole into one harmonious scheme. The result was a distinction in their building such as we did not often achieve in this country, where we were in the habit of regarding those things as matters for different branches of the industry. As to the relationship of the architect to the building, architecture began where building terminated. Building was the economic fulfilment of social and structural requirements—social, because whether the building was a house, a theatre or a church, its purpose was a social one; structural, because we wanted the building to stand firmly and be efficient. But that did not necessarily produce architecture. A building might answer every purpose perfectly happily and satisfactorily, but give no indication of what it was. That was where the architect came in. Functionalism in a building was a right and proper thing, but we must get beyond functionalism to what might be called expressionism.

Referring to the present unfortunate condition of the building industry, the speaker said he could not see why we should throw a lot of people out of employment when so doing was obviously unnecessary. It might be said that we could not afford to put up buildings, but a few hundred years ago, when even the barons did not have glass windows or a satisfactory system of drainage, there was enough surplus energy to build the cathedrals that were some of the world's greatest buildings. To-day we kept men idle, ruining their character instead of finding some means whereby they might be employed. He would not say they should be employed building cathedrals in these materialistic days; but they might be reconditioning or rebuilding the miserable houses that so many people had to live in. Why not use the surplus labour for that purpose? There was a need to recondition thousands of houses all over England. It did not require the highest class of labour. Going round the Exhibition he had seen that the figures for unemployment were going up and the expenditure on building going down. This was a ridiculous state of things when so much of all classes of work required doing, and would result in a valuable asset to the country, and he was going to see whether some method could not be made to exchange unemployment for some kind of useful work. Conditions in Scandinavia in the matter of housing were very much better than they were here. Little countries with less population than London got ahead of us in that respect.

On the motion of Mr. F. J. Maynard, seconded by Mr. R. Wynn Owen, votes of thanks were passed to Mr. Lanchester and to Mr. Montgomery.

BRICKS AND BRICKWORK.

Last Monday, after a luncheon given at Olympia by the directors of the Building Exhibition to the members of the South Eastern Federation of the Brick Trade, Mr. Alan E. Munby, F.R.I.B.A., gave an address on the subject of bricks and brickmaking. Mr. H. J. Lawrence presided.

Mr. Munby, in his address, said he would not endeavour to teach the brickmakers their business, but would suggest that architects and brickmakers might co-operate a little more in some of the problems of brickmaking which still needed solving. The Research Station was doing a great deal; and, as a member of the Research Board, he wished to thank all those who were helping the Research Station with advice and funds. In particular he believed the London Brick Company was doing something to forward the work on efflorescence on bricks. Brickmaking must be eventually a much more exact science than it was now. Other industries, such as those for the production of concrete, steel and so on, were becoming more and more exact, more and more scientific, and more and more definite as regards what they gave to the architect; and he felt that in brickmaking one might eventually hope to get a little more of the pure scientific aspect. Clay was a difficult material. It varied very much in chemical composition. It contained a great variety of different materials—silica, felspar, mica, and also such things as selenite and iron sulphide. Some of those things in the kiln would tend to produce fluxes that were not wanted. He quite understood that the firing of clays must be a very intricate thing, and must mean either a great deal of careful scientific investigation or a great amount of skill on the part of a firer accustomed to a material which he had handled year in and year out; so that he knew very well how it would behave, although he did not know what it was made of.

Referring to damp walls, the speaker said they presented the most important problem that architects and brickmakers had to face. Architects wanted to be assured that the walls they put up would keep out the wet. At the present moment an 18 in. wall was not the slightest protection against wet. Many of those present would say, "Our bricks are all right, but you get a poor man on them who makes a poor mortar joint. Those joints are not filled. But if the builder did his job properly our material would be found to be all right." He did not endorse that. It had been proved that some very badly built houses were good damp resisters. One might have a jerry-built house in which all the joints were buttered up on the face with nothing inside. But some of those houses were excellent damp-resisting houses. He thought a great deal more depended on the quality of the brick than on the quality of the mortar. The relations between brick and mortar were being worked out. They were very interesting, and we were coming back to the idea of using hydraulic limes in place of cement. He, personally, never used cement in brick building if he could help it. How was the dampness problem to be tackled? He did not think that a great many slack-baked bricks were sold for decent buildings, but he should imagine it was rather difficult for the brickmaker to avoid making slack-baked bricks occasionally, and he did not know how they arranged the composition of their bricks so as to avoid the difficulties of slack baking. It was possible to get as small a difference as about 24 degrees centigrade between the incipient fusion which was wanted and the viscosity which meant

that the brick began to run. This demanded careful watching. Twenty years ago, when he was studying these things, he learned that the more one could separate the temperature of incipient fusion from that of viscosity the easier became the problem of the brickmaker in firing his bricks. The presence of lime in a brick tended to bring together the incipient fusion and viscosity temperatures. Magnesia was not much used in this country, but he believed that it separated those temperatures, and if the possibility occurred of mixing a certain amount of Dolomitic clay with another clay rather difficult to burn, he thought this might improve the burning quality. Another thing was that we must get a clay which would fire and not slack bake, because a slack-baked brick would disintegrate in time, and it would hold moisture for a very long time.

One theory that was held was that we should try to get an impervious wall. He did not see how anybody could expect to get that short of a "sheet of glass" or glazed brick. Architects did not want impervious walls, because these generally meant a very inartistic-looking brick. What they wanted was a porous sand-faced brick which would dry out readily. Putting aside the question of impervious materials, how were we to get a brick sufficiently porous to give a nice texture which yet would dry? The Building Research Station had brought to attention one important fact. We knew that moisture was absorbed in bodies by what was called capillarity. The Research Station had proved that the finer the pores of the material the more was the water drawn up towards them. Brickmakers might make a brick with fine pores outside and coarse pores inside if something could be done in the firing which would produce on the interior of the brick some additional amount of expansion. If that were done the moisture would always be drawn to the outside face, and that would be an enormous asset. But he thought the real secret was ventilation, and he based that opinion on the fact that a tile-hung wall never let water through. That was because of the ventilating space behind the tiles. Obviously, if a wall got wet we must let air in behind to evaporate the moisture. He had built a cottage in Sussex with 9 in. hollow walls. It was very well built, but in the rainy winter of two or three years ago the water had driven across the hollow walls. At that time the cottage was empty, but when he went into it in the spring he could see great patches where the water had been driven. Surely, too, a hollow wall was rather a sign of weakness, showing that we had not succeeded with our material. Could not a brick be made that would do its job without being built as a hollow wall? For example, would it be possible to make a brick with a hollow centre—not sufficiently hollow to disturb its bearing centre, but with holes in front so that the water drove through and evaporated on the face of the brick? Or could a skeleton brick be produced?

Another matter was that the small bricks which the architect loved to use might be standardised a little more. There were many different kinds that architects used—for example, thin bricks with a thick joint. There was a great difficulty in using those small bricks with a suitable backing brick. In his office he specified hollow walls south and west—two walls each of 4½ in. and a cavity of 2 in. But north and east he specified a solid 9 in. wall to save expense. When the bricklayers came to bonding up their corners all kinds of difficulties arose, and if one had a bit of stonework it had to be worked in and it worked very badly with the courses of brickwork. He thought it would be a great help if the brickmakers could produce a cheap bonding brick for backing. Builders commonly got one sort of brick from one maker and another sort from another, but could not the makers combine so as to supply in one consignment the right quantity of each sort of bricks for a wall?

There was also the question of colour. Colours should not be standardised; but the architect choosing a brick might say that he would like a mixture of colours A, B, and C. But if something did not go quite right, he got a larger proportion of one colour, probably a lighter colour, than he wanted. Then the material came in lorry-loads, and the builder, being asked to mix the different sorts, put in a bill for handling. When an architect ordered a multi-coloured brick, choosing three different shades, the brickmaker should know what was wanted and how it was to be delivered, and the contractor should know whether he had to mix the bricks on the site, or whether they were to be delivered to him ready for use.

Lastly came the question of efflorescence. That was a very annoying thing, arising chiefly from the presence of sodium sulphate, which was a mineral very soluble in water and fairly frequently present in clay. But efflorescence could also arise from things like calcium sulphate, which might or might not be present in the clay. Here arose the question of washing. Some clays, of course, never saw any water; but those that were washed, did they get the weathering they did in the good old times when they were left for the winter? We must get rid of a lot of soluble matter if we were to get rid of efflorescence. It was a trouble outside and a serious trouble inside if one had valuable decorations in the building. The other day he had seen a building which had stood for eight years without showing efflorescence, but this was manifest now. However well one washed the clay, one might get the efflorescence produced as an effect of the sulphur in the coal used for firing acting on the compounds in the clay itself. One might get a clay with a certain amount of lime in it, and, if one had a coal containing pyrites when it was burned, one got a calcium sulphide, and the mineral called selenite actually formed in the brick by the firing. Was not this rather a question of buying coal on an analysis? Was it possible to reject for brickmaking purposes coal containing iron pyrites? He thought the quality of the coal used might have more to do than was imagined, not only with efflorescence but with viscosity and too ready fusion. A thing which sometimes occurred was that the black centre of the brick was not due to carbon but to carbonaceous matter that had not been properly burned out. That did not often occur, but when it did it was rather serious. On a wall with valuable decorations one might get tarry stains from matter in the bricks if the coal with which those bricks had been burned had contained a lot of carbonaceous matter and the pores of the bricks had been sealed too soon in a reducing temperature in the kiln. The problem here was to burn the carbonaceous matter to insoluble carbon before the firing was carried to a point where one got incipient fusion.

A group photograph taken last Saturday at the Building Exhibition, Olympia.

LEGAL SECTION

NOTES ON CURRENT CASES

Liability to the Public of a Statutory Public Body.

A POINT of importance to members of the public was raised in the case Guilfoyle *v.* Port of London Authority (1932, 1 K.B. 336). A swing bridge which had been originally constructed under statutory authority by the St. Katherine Dock Company in 1875, "in order to provide means of communication between existing or future public roads on either side of the Victoria Dock Extension," had in 1908 been taken over by the Port of London Authority, and by the Port of London (Consolidation) Act, 1920, the duties of the Authority as regards this bridge, a portion of which was a railway bridge, were defined, the Authority having to keep it in perpetual repair, and also it was provided: "The swing bridge carrying Connaught-road over the passage between the Royal Victoria Dock and the Royal Albert Docks shall be maintained by the London Port Authority in such manner that 15 ft. of the width of such bridge shall at all times be appropriated to the road, and the Port Authority shall at all times continue to permit such swing bridge and the roadway thereon to be used free of charge by the public in connection with any road or roads which may communicate or be thereafter made to communicate therewith, and shall at all times maintain such roadway in good repair and condition." There was also a provision that the bridge should be kept closed except when required to be opened for dock traffic.

On March 18, 1930, the plaintiff, a member of the public, returning home from work and having to cross this bridge, struck his foot on a nail projecting above the level of the footway and fell, sustaining injuries in respect of which he was awarded £153 damages by a jury. The defendants, on this verdict, moved for judgment for the defendants on the ground that the Authority were an authority who were not liable in law to a private individual who suffers damage by reason of mere acts of non-feasance on their part. The evidence showed that the roadway was made of iron plates screwed down to some foundation, the footway in question being made of timber held down by 5-in. nails, and, owing to the pathway being allowed to get into disrepair, the timber round one of the nails had become worn so that the nail projected above the level of the footway, and no question was raised that this defect was not due to non-feasance.

The Court, in giving judgment, first pointed out that the defence was not open to the Port Authority, who had statutory authority to impose tolls for the use of the docks, that they could escape liability on the ground that they were a public authority who were merely in the position of carrying out their duties under an Act of Parliament in the interests of the public at large, as that was precluded by the case of Mersey Docks and Harbour Board *v.* Gibbs (1866, L.R. 1 H.L. 93), in which it was held by the House of Lords that the principle on which a private person or a company is liable for damages occasioned by the acts of servants applies equally to a corporation which has been entrusted by statute to perform certain works and to receive tolls for the use of those works, although those tolls, unlike the tolls received by a private person or company, are not applicable to the use of the individual corporators or to that of the corporation, but are devoted to the maintenance of the works, any surplus being used to diminish the amount of the tolls (see also Blunday Clarke and Co. *v.* London North-Eastern Railway Co., 1931, 2 K.B. 334). The case, therefore, had to be decided on the ground set up by the defendants that, this bridge being a highway, the liability of the Authority was analogous to that of a highway surveyor who is not liable for acts of non-feasance (Cowley *v.* Newmarket Local Board, 1892, A.C. 345).

The Court, in giving judgment, after referring to the case of Maguire *v.* Liverpool Corporation (1905, 1 K.B. 767), as showing that the transfer of the duties of a surveyor of highways to a public body did not in itself alter the nature of the liabilities, held that this bridge was not an ordinary highway: it had never been dedicated to the public, and was the private property of the defendants upon their private ground. This alone would not have concluded the question, but the Court then pointed out that the footway was only part of the structure, the other portions being for railway lines, the whole being constructed to swing as one, and the footpath, unlike the ordinary modern pathway, was constructed of wood. On this ground, therefore, judgment was entered for the plaintiff for the amount found by the jury.

Workmen's Compensation: Silicosis.

In a recent case, White *v.* Winterton Pottery (Longton), Ltd. (1932, 2 K.B. 265), the Court of Appeal made most stringent comments on the drafting of two schemes, the Silicosis and Asbestosis (Medical Arrangements) Scheme, 1931, No. 341, and the Various Industries (Silicosis) Scheme, 1931, No. 342, both of which Orders were issued on the same date, April 30, 1931, the Master of the Rolls, who spoke for the rest of the Court on this point, being reported as having said: "There is no palliation for the obscurity of their terms such as there is sometimes in the case of an Act of Parliament which, in the course of passing through the two Houses of Parliament, has been the subject of amendments. These amendments often complicate the Bill and cause inconsistencies, but these two Orders were issued complete from the Home Office on the same date, and care should have been taken to make the one complementary to the other, so as to avoid the difficulties which plainly arise upon them. As it is, the parties have been placed in a difficulty, the learned County Court judge has been placed in a difficulty, and this Court finds great difficulty in construing the terms of the Orders."

Even with the assistance of the judgments in the Court of Appeal we find it difficult to make the matter clear, and the result has borne hardly on the parties, as not only has the case had to be remitted to the County Court for rehearing, but the Court also felt constrained to make no order for the costs of the appeal, and the costs of that must in any event fall on the parties.

The facts in themselves are simple: the workman, White, was employed by the respondents in their pottery works until September, 1930, when he obtained a certificate from the certifying surgeon under the Various Industries (Silicosis) Scheme, 1928, that he was suffering from silicosis, and was thereby totally incapacitated, and that total disablement for work commenced September 25. An appeal by the employers under paragraph 6 of the Scheme was dismissed, and they then paid compensation, 27s. 6d. a week, commencing from September 25, and continued it until October 17, 1931. On September 9, 1931, the employers, under paragraph 9 of the Silicosis and Asbestosis (Medical Arrangements) Scheme, 1931, No. 341, had applied to the Medical Board, constituted under that Scheme, to have the man re-examined, and on October 21 the Medical Board, as the result of the re-examination, issued a certificate of re-examination certifying that the man was no longer totally disabled from work by reason of silicosis. On this certificate the employers stopped the weekly payments, and on October 28, 1931, the workman applied for arbitration. Before the county court judge it was submitted on behalf of the applicant that this certificate was invalid, but the county court judge held that it was valid, and that his jurisdiction was entirely ousted by the provisions of the Silicosis and Asbestosis (Medical Arrangements) Scheme, 1931, No. 341, paragraph 9, and he further held that the fact that the man had originally been certified under the Silicosis Scheme, 1928, made no difference in his finding.

The matter is too complicated to enter into it in detail here, but put very shortly the point appears to be as follows:—The Various Industries (Silicosis Scheme, 1928, No. 975) was repealed by the Various Industries (Silicosis Scheme, 1931, No. 342), with a certain reservation, and this latter scheme has to be read as one with the Silicosis and Asbestosis (Medical Arrangements Scheme, 1931, No. 341). We shall refer to the above schemes by their numbers. Scheme 342 was substituted for Scheme 975, but it was provided in Scheme 342 that the Scheme 975 should continue to apply to workmen who came within that scheme engaged in the processes specified in paragraph 2 (as amended by the scheme of 1930), and who were not entitled to claim under the substituted scheme, "except that the provisions of this scheme (342) as to examination and certification by the Medical Board shall be substituted for the provisions in 975 as to examination and certification by the certifying surgeon and medical referee, and the Medical Board shall have the same powers and duties in cases arising under that scheme as in cases under this scheme." Paragraph 9 of 341 provides that where in pursuance of any compensation scheme application is made to the Medical Board for a re-examination of a workman who has been certified under this scheme or any compensation scheme, the Board shall re-examine the workman and give a fresh certificate.

The difficulty has been to ascertain the effect of these various schemes, but we think that the effect of the judgment in the Court of Appeal may be briefly stated as follows:—That in this case, where the man was certified under Scheme 975, 1928, the only effect of the institution of the Medical Board is that the functions of the certifying surgeon and the medical referee necessary to establish the qualification of the workman to be compensated, *i.e.*, the preliminary steps to claiming compensation for an industrial disease, are transferred to that body, but that does not prevent the operation of the Act in those sections specially mentioned by reference to sections as numbered in Scheme 975 (but only referred to by reference to their subject matter in Scheme 342) from applying, that is the provisions as to stoppage of payments and submission to medical examination. Then, as regards paragraph 9 of Scheme 341 as to re-examination, it appears to have been held that that provision, according to the above interpretation of the two schemes, was not imported into Scheme 975 at all, and the employers had wrongly resorted to this procedure in their application. Thus, the decision of the county court judge that his jurisdiction in arbitration was ousted and that the certificate of the Medical Board under paragraph 9 was valid, was set aside, and the matter was remitted to him for further consideration, leaving it open to the judge to decide whether the workman was entitled to an arbitration under sections 12, 18 or 19 of the Act, these sections being incorporated in Scheme 975. (See Pudney *v.* France, Fenwick and Co., 1925, 1 K.B. 346; *The Builder*, December 26, 1924.) It will be seen that the whole matter is very obscure, but it appears desirable to call attention to the observations of the Court of Appeal on these schemes in the hope that the authorities may reconsider the whole matter and issue a new set of orders capable at least of being construed by the Courts without such difficulty.

INQUIRY BUREAU

QUESTIONS.

Removing Whitewash from Masonry.

SIR,—Can you suggest a method of removing whitewash from rock-faced masonry? Caustic soda has been applied with unsatisfactory results. Spirits of salts have been successful, but prove to be too expensive.
P. S.

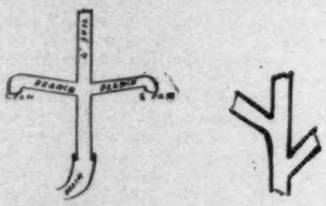
Rent Restriction: Severance of Fixtures.

SIR,—(1) *Rent Restriction Act: Decontrol.* What constitutes decontrol?. Giving up the key to the landlord's agent at his office after 1923? If the key is held by the landlord's agent for two days only, or even less, and a house is then relet, is it safely decontrolled?

(2) *Severance of Fixtures*: In a freehold house a sub-tenant who claims he is under the Rent Act has cut away half the kitchen dresser from the wall and floor and put it in the coal cellar without asking permission of the landlord. What proceedings can be taken?
E. N.

Branch Soil Pipes.

SIR,—I am running a thirty-foot 4 in. soil pipe, with two lavatories to same—one each side of the stack and both on the same first floor. Although the inspector specifies anti-siphonage, I am wondering whether it is absolutely necessary.
L. H. T.



QUERIST'S SUGGESTION. PREFERABLE ARRANGEMENT.

[The method of connecting branch soil pipes directly opposite each other as shown in our correspondent's sketch is objectionable. In the event of one water-closet being left unused for some time (office vacant, tenant on holiday, etc.), forcefully discharged excrement from one branch might enter the other branch and there adhere and harden. There is something in our correspondent's suggestion that in the circumstances described the ill effects likely to arise from the omission of an anti-siphonage pipe will be minimised; but as the results of evaporation have also to be considered, such omission is undesirable. A very small movement in an already lowered seal might result in the opposed trap becoming unsealed.—ED.]

ANSWERS.

Slaking of Mortar.

[ANSWER TO "WANDERER," SEPTEMBER 23.]

SIR,—I, personally, have great faith in the method of running lime into putty before mixing the mortar as a better way of ensuring a thoroughly incorporated mortar. In the more usual method, however, if the mortar is thoroughly mixed and allowed to temper, an equally efficient mortar is produced. My point is that in the first method results are more certain.
MIX

Wall Ties.

[ANSWER TO T. BROWN, SEPTEMBER 23.]

SIR,—I can answer for wall ties dipped in tar and sanded which have been in work for forty years. These I have found to remain with a good reserve of strength in ordinary 11-in. cavity work.
BOND.

Down Draught and Siphonage Problem.

[ANSWER TO "H. T. B.," SEPTEMBER 23.]

SIR,—The two plain pots should vary by about 12 in. in height, but I suggest a couple of the many proprietary earthenware pots designed to obviate similar conditions. There are various types, generally on a louvre principle, and different people have different preferences. The advantage is that they are inoffensive and can be of similar height.
POTS.

Pargetting.

[ANSWER TO "CHIMNEYS," SEPTEMBER 23.]

SIR,—Cement pargetting will flake right off when a chimney catches fire. This is not the case when the parging is in cow-dung and lime.
PARGE.

Non-slip Surface.

[ANSWER TO "STEPS," SEPTEMBER 23.]

SIR,—The method suggested will be successful for a time, but the surface will certainly wear smooth. A better method is to mix carborundum with the surfacing, and this provides a permanently non-slip surface, which is, I take it, what your correspondent requires.
PAVIOUR.

HOME-GROWN SCOTS PINE TIMBER*

THE Department of Scientific and Industrial Research has just issued a Forest Products Research Bulletin dealing with the timber of home-grown Scots pine. As a result of a careful series of investigations it is stated that "a quality of home-grown Scots pine timber equal to that of good quality imported red or yellow deal of joinery grade can be produced in this country, but the rate of growth must not be excessive, i.e., the timber should contain on an average 12 rings or over per inch radius."

Timber grown in different localities varies considerably in weight and ranges from 25 lb. to 45 lb. per cu. ft. at a moisture content of 12 to 15 per cent. The darker colour of the heartwood, which is an indication of durability, is more marked in the home-grown than in the imported timber, while the percentage of heartwood is dependent on locality and age.

The home-grown timber seasons without difficulty, both by air-drying and kiln processes, the only serious defect being the occurrence of a blue stain in the sapwood which can be largely guarded against by proper ventilation in piling. "A kiln with forced circulation is essential if the quickest and most economical results are to be obtained. The main difficulty likely to be experienced in drying inferior quality material is due to distortion on account of irregular grain and to some loosening and cracking of the knots." Detailed recommendations regarding the most suitable seasoning treatments are given in the Bulletin.

"The results of the tests on clear material indicate that home-grown Scots pine has fair mechanical properties, in mean value slightly below the best imported timber from the Baltic and White Sea ports. Locality, however, must be largely taken into consideration. Thus, the Bedgebury (Kent) and Walcott (Shropshire) material was in general value equal to the imported timber, that from Loch Tay (Perthshire) very slightly inferior, and that from Weasenham (Norfolk) slightly inferior to the other three." The home-grown timber is harder by about 30 per cent. than the imported timber. "This quality is of importance," the Bulletin points out, "for certain uses, such as flooring and sleepers, and has also to be taken into consideration when estimating the machining qualities of the wood."

As regards preservative treatment, the home-grown timber readily absorbs creosote, but uniform penetration is often not obtained owing to excessively rapid absorption by the sapwod. Methods are suggested in the Bulletin for overcoming this difficulty. The heartwood of Scots pine is durable in dry situations and the sapwood is moderately durable under cover. Well treated with creosote the sap and heartwood both last, even as posts or poles in the ground, for 40 years or more. Woodworking tests indicate that the home-grown timber is fairly easily worked and can be finished to a good surface, very little inferior in finish to that obtained with the imported material.

In dealing with the utilisation of the timber the Bulletin states that fellings during and immediately after the War depleted many of the choicest stands of timber in this country, and this makes it the more imperative to replace the supplies. In doing so, one of the most difficult problems will be to find a market for the smaller thinnings. Pit props and pitwood are at present the chief outlet. "It will certainly be necessary to explore other possible markets to absorb the large quantities of small sizes which will be forthcoming, taking into account the extended plantations at present being created in Great Britain." Possible outlets suggested in the Bulletin for such timber include its use for composition boards, craft paper, cardboards, wood wool, kindling wood, creosoted fencing posts and rails, hurdles, etc. At present home-grown Scots pine is used to a very limited extent for building purposes, since the timber is not available in the longer lengths generally required. The mature timber of shorter lengths is in more common use for sleepers, sawn colliery timber, barrel staves and heads, crates, box-making, etc.

* Summary of Forest Products Research Bulletin No. 15, H.M. Stationery Office. Price 5s. net.

OBITUARY

John George Gibbins, F.R.I.B.A.

We regret to record the death of Mr. John George Gibbins, F.R.I.B.A., of "Haytesbury," Ditchling, Sussex, age 89, on Wednesday, September 21, at Hurstpierpoint Nursing Home. The funeral took place at Ditchling parish church on Saturday last. Mr. Gibbins served his articles in the office of Messrs. Habershon & Pite, Bloomsbury-square, where he had, as a fellow-pupil, Sir William Emerson, to whom he was for many years much attached. In the 'sixties he became partner with Horatio Nelson Goulty, of Union-street, Brighton, architect of the Turkish Baths then in course of erection in that town. After the death of his senior partner in 1869, Mr. Gibbins removed his offices to Palace-place, near the Steyne, where he built a club, and the school of art, hard by on the grand-parade, was erected from his designs; also a church at Patcham. Among his domestic buildings were country houses at Haywards Heath, Sussex, and another in Middlesex, not far from Perivale, with many outbuildings, on an extensive site facing Hanger Hill, Ealing. Mr. Gibbins held the post of architect to the Brighton Hospital at Kemp Town. He was elected a Fellow of the Institute in 1888. His pupils included Mr. Walter J. N. Millard, F.R.I.B.A. (retired) (Pugin Student, 1879), of Welshpool, and Mr. A. Dunbar Smith, F.R.I.B.A. (Godwin Bursar, 1903), architect of the Welsh National Museum, Cardiff, and the Fitzwilliam Museum Buildings, Cambridge.

"I was serving my articles with Mr. Goulty [writes Mr. Maurice B. Adams, F.R.I.B.A (retired)] when Mr. Gibbins arrived, and happened to win the office competition which he thoughtfully instituted, the subject being a town house. This venture was to contest the industry and skill of the staff, a task which enlivened the ordinary course of affairs in Union-street Chambers. However, on making his choice, prior to meeting the competitors, Mr. Gibbins had mistaken the identity of the authorship of the scheme he selected, so wrote the wrong name in the prize-copy of Rickman's 'Attempt to Discriminate the Architectural Styles in England.' However, his critical remarks soon discovered the fact that I was the author of the design—not Carden, the senior of the staff. Mr. Gibbins generously made amends by duplicating the prize, though, indiscriminately, the words 'Second Prize' occur inside my copy of this book, the companion of Parker's 'Glossary' still in use. I owe Mr. Gibbins my best thanks, as through his good services I entered the offices of Sir William Emerson, in Westminster Palace Chambers, as an improver."

THE BUILDING TRADE

HINTS ON BUILDING PRACTICE.—XIV

By J. R. TAYLOR.

CARPENTRY AND JOINERY REPAIRS AND RENEWALS (*Continued*).

At one time the terms "carpenter" and "joiner" were used with meanings more sharply distinctive than is now the case, though in practice there was always some tendency for them to merge. Roughly speaking, a carpenter was one who framed up unwrought timber in and about a building, while the joiner was he who prepared work in the shop and was not as a rule expected to do much actual fixing unless the work involved very close and accurate fitting. The carpenter was not expected to carry so complete a kit of tools as the joiner, or "bench-hand," nor in some directions to possess the same degree of skill. On the other hand, many of the old-time carpenters, with axe and adze, were able to impart a character and quality to their work which the hand plane could not give, and which the machine seems likely to cause us to number amongst the lost arts.

One consequence of this turnover to machine production is that when extensive repairs and renewals to woodwork in old buildings are desried it is often only with difficulty that suitable men can be found for the work. Firms who make a speciality of church restoration work employ such men, and they may also be found on the staffs of some long-established builders whose traditional practice has been to train and retain their own apprentices. But in general, the changing times call less insistently for a high degree of manual skill. Yet here and there, and particularly in the villages, one finds men content to be called carpenters, but who, in addition, do a little wheelwrighting and some cabinet work, but who, if entrusted with repairs of this sort, will handle them tenderly and with skill. They can match the grain when a new piece has to be let in, and, what is of great importance, they know just where to look for a piece that will match. The best of them know something of the formation of joints, and are not likely to destroy by wrenching apart those that have concealed tongues, nor to do other damage through ignorance or lack of care. But I must not be understood to say that all village carpenters possessed these qualities. What I wish to make clear is that this class of repair work demands such qualities, and must therefore be put in hand with caution. Work of this character should not be made the subject of a firm estimate, but should be executed on a cost-plus-percentage basis.

Staircases.

In a private house where stairs are carpeted, the necessity for repairs to treads hardly arises; but on stairs up to offices and in cottages this is a repair that is in constant demand. For offices and other public or semi-public staircases a remedy is found by fixing nosings of metal, rubber, reinforced fabrics, or in combinations of these. But all too frequently the wooden tread is allowed to become very much worn before a remedy is applied, and consequently the new nosings themselves suffer for want of solidity of bed. If the steps are badly worn it is better to take them out and replace them than to piece them, but where the covering to soffit does not permit access to the blocks some greater thickness of tread may be wanted to ensure rigidity. Obviously, new treads cannot be entered into existing housings in such circumstances, and support has to be found by providing bracket pieces, which may be screwed to the strings and to the old risers, thus tying all the work together again.

For want of sufficient width for the easy moving of furniture, both handrail and balusters are frequently broken. The handrails usually break at or near to handrail jointing-screws, and the balusters at some point at which the turner's chisel has entered a little too deeply. The methods of repair more or less suggest themselves in individual cases, but in the case of balusters, inserting a dowel and glueing the join makes but a poor job. Where possible, broken balusters should be replaced with new. It is but seldom that handrails bracketed to walls remain in permanently good condition if the brackets themselves are merely screwed to driven plugs, and the handrail depends upon screws driven into the underside at infrequent intervals. On the other hand, rails of special section that are in contact with the wall and provide a groove for the fingers, are not comfortable in use unless the section is a bold one, taking up considerable room as well as adding to first cost. Another objection to them is that the wall decorations suffer unless the daily dusting is very carefully done. The usual necessary repair is the substitution of better brackets more firmly fixed for bracketed rails, and resecuring with drilled-in plugs to those fixed directly to the walls.

External wooden staircases are still sometimes used, and if of heavy construction last reasonably well if sufficient attention is given to frequent periodical repainting. If the treads are of hardwood they tend to become slippery in damp weather. The railway companies almost invariably had them constructed of pitch pine which, apropos of the last remark, is not ranked amongst the hard woods. It is better not to enter the lower ends of strings and handrails into newels because of the water that flows down to the joints. When repairs are called for it is usually found that the bottom step and the string ends are decayed, and sometimes further service may be obtained by cutting these off and providing a wide concrete step. In this connection it is rather curious to note that while nine out of ten builders will mount a veranda post on a stone or concrete base, and thus stave off decay by keeping it out of and above the ground, the same amount of care is comparatively seldom displayed in regard to other woodwork subjected to similar conditions of exposure.

Roof Lights.

To a very large extent lead-clothed patent glazing bars have superseded wooden bars for skylights, lantern lights, and glazed roofs, but the builder is still constantly called in to repair existing lights. If decay is extensive, repair is seldom worth while, for the added length of life is not as a rule sufficient to justify the cost. In the majority of cases it is found that the seeds of decay are inherent in the design, and in particular in the omission to provide proper condensation channels to the glazing bars and proper clearance between the underside of the glass and the bottom rail of the light. Many of them also suffer for want of a capping over the putties. More or less difficult of access, their need for repair is not always made evident until the light fails to keep out the rain; but long before that the putties may have partially failed and moisture have found entrance in no greater quantity than will run down the underside of the glass. As is the case with many other descriptions of external joinery, moisture finds entry at positions which the painter cannot reach, and all detailing should be directed to obviating this as far as possible.

Roof Timbers.

Fascias and barge boards generally fail by reason of decay setting in at the back of them. Even when the projection is such as to make the backs accessible to the painter, it does not always follow that they will receive proper attention. Fascias also fail by reason of water dripping from the eaves of slates or tiles being driven in on them instead of falling into the guttering. The methods to be adopted in carrying out repairs are usually fairly obvious, but it would nearly always be an advantage to correct the guttering falls at the same time. Very often it will be found that the guttering sags somewhere or is placed too low at one end in order to get fall over too great a distance. As this is a fruitful cause of damage to rafter-ends and the origin of other troubles, an additional stalk of rainwater pipe should be added where necessary or desirable.

Sometimes purlins decay by reason of neglected or unsuspected defects in roof coverings. This is especially the case where porous tiles are used without the precaution of adding boards, felting and counter battens. Water soaks through in small quantity, runs down the rafters, and is arrested at purlins and wall plates. This may go on for a very long time unsuspected by reason of the absence of stains on the plaster ceilings, which usually give warning of other defects that allow water to come through in greater or more concentrated volume. I have never been able to understand the attitude of those who will accept a very porous tile for the sake of its appearance, though rejecting a porous slate without hesitation. Roofing felts placed under either slates or tiles should be impervious and of good quality. It is far from being an unknown thing for an outbreak of dry-rot to originate in a roof, and in several cases that have come under my notice there was very good reason for considering that poor quality felt had contributed to the trouble. Ends of timbers entering walls should be treated with preservative, and usually this is specified; but if a purlin is shortened, the end of a hip cut and fitted, or a wall-plate halved, it frequently happens that the necessity for treating the new exposure is overlooked or ignored.

In a recent article published in *The Builder* (the series "How to Vet a House," by Mr. George O. Scorer, F.R.I.B.A.), it was pointed out that in some circumstances it might be considered necessary to ventilate the space between a painted ceiling and a polished floor. Granting this, it is obvious that the space between ceiling and leadwork to a flat roof stands in similar need. Outbreaks of dry-rot in roofs covered with lead are not uncommon, but defects due to wet-rot are more frequently met with. It is water in small, rather than in large quantities, that here, and in many other cases, does most damage.

Adverting to a previous note respecting the use of angle plates for repairs to window sashes and casements, a few days ago I examined some wooden houses made in Sweden and erected near London. It was noted that the whole of the wooden casements had angle plates of iron at each of the four corners. These angle plates were a little stouter than those generally stocked here, and had obviously been screwed on as part of the original construction. They would thus add but very little to the first cost, and it struck me that this was a very useful precaution to take.

The World's Fair, Chicago.

A correspondent writes:—"Some striking examples of architecture will be seen at the World's Fair, to be held at Chicago in 1933. A dozen of the main buildings are already completed or well under construction, upon a site which has been reclaimed from Lake Michigan. One of the most interesting buildings is the Hall of Science, designed by Paul Cret, which has a carillon tower over 70 ft. high. The Palace of Electricity has been designed by Raymond Hood, and, in common with the general buildings, is remarkable principally for its simplicity and freedom from applied design."

BUILDING RESEARCH STATION

We conclude the abstracts of inquiries submitted to the Building Research Station, commenced in our last issue. Crown copyright is reserved.—Ed.

Granolithic Floor Finishes.

An architect reported lifting at the edges of granolithic floor slabs, and cracking in other parts of the building, where the granolithic finish had been carried over supporting steel joists. The concrete slab had been reinforced with wire mesh over the joists.

Reply.—Failures of the first type are quite frequent, and the cause is primarily due to poor adhesion between granolithic finish and the concrete base. The hollowness at the edges of the squares may be accounted for by warping of the granolithic concrete slab due to drying shrinkage, which obviously will be greatest at the upper surface. Any cement concrete slab would exhibit the same tendency to curvature, if exposed to drying conditions on one side only without adequate restraint.

It is difficult to obtain good adhesion of a granolithic finish to a concrete floor, especially when, as is often the case, the floor may be some weeks old and far from clean when the finish is applied. The subject of adhesion between successive layers of concrete is discussed in Building Research Bulletin No. 9, "Bonding New Concrete to Old" (H.M. Stationery Office, price 3d.).

The formation of cracks where floor slabs are carried over supporting steelwork is by no means uncommon. The cracking is most frequently due to the lack of adequate reinforcement to take up the tensile stresses at the top of the slab due to reversed bending moments over supports. It would seem that in this case the wire reinforcement was insufficient. If the floor is not designed as a continuous slab over the supports, it would be preferable to provide jointing strips over supports in order that the formateion of irregular cracks may be avoided.

Moisture in Flues from Gas-fired Boilers.

An architect reported that the installation of gas-fired boilers led to penetration of moisture from the flues to the internal decorations of walls, which had not occurred when coke-fired boilers were used. He desired to know whether it would be possible to treat the walls in any way before redecoration in order to prevent the appearance of moisture, or to treat the boiler fumes in some way before they entered the flues.

Reply.—It is probable that a gas-fired boiler will produce more water vapour as a product of combustion than would a boiler fired with dry coke. In the normal course of events, however, coke supplies are often wet, and when this is the case a considerable volume of water vapour must be expelled by way of the flue. As a general rule the heat of the gases would be such that the flue is maintained at a fairly high temperature, and condensation of the moisture would then be unlikely. It is just possible, however, that the efficiency of the gas-heating system is such that the heat is largely transferred to the water, with the result that the temperature of the flue gases is low, and thus the walls of the flue remote from the boiler are sufficiently cool for the condensation of moisture in the flue gases.

It is certainly a difficult problem with which to deal, and the ideal solution is the provision of an impervious flue lining. Any attempt to apply a waterproof treatment to the plaster will fail, since the moisture in the brickwork must find some means of escape by evaporation, and the zone of saturation will merely extend beyond the waterproofed area. It is hardly practicable to remove the water vapour before the gases enter the flue. This could only be achieved by cooling the gases, and the efficiency of the flue as a ventilator would then be reduced; with gas heating this would be most undesirable.

It seems to us that the simplest method of overcoming the difficulty would be to decorate with plaster on lathing, or wallboard, out of capillary contact with the damp brickwork. It is just possible that the additional insulation provided in this way would prevent the flue lining from cooling to condensing temperature. If the flue is exposed in the roof space additional insulation here might be very valuable. It is assumed that there is no question of moisture penetrating from outside the roof. Damp penetration by way of chimney stacks, lacking a damp-course at roof-level, is a very common trouble indeed.

BUILDING SCIENCE ABSTRACTS

We have received the following from the Building Research Station, Watford:—

One of the facts that has been revealed by scientific investigation of the acoustic and heat-insulating properties of walling materials is the need for a material which can be used in conjunction with cement or plaster to produce a light-weight concrete satisfying the requirements of modern building construction. Various materials of this kind are already in use. These include natural materials such as pumice, by-product materials such as granulated blast-furnace slag and furnace clinkers, and manufactured materials such as porous, sintered clay. In Abstract No. 1357, reference is made to the production in America of a light-weight aggregate from Zonolite, a mineral, black in colour, of which considerable deposits occur in Montana. This substance resembles biotite mica in composition. When subjected to suitable temperatures it expands to some ten times its original size and weighs about 5 lb. per cubic ft. as compared with about 100 lb. per cubic ft. before treatment. The fired material, when crushed and ground, is finding extensive use in the manufacture of wallboard and as an aggregate for special plasters.

Another new material, or rather, an old material which seems to be coming into its own again, has been dealt with in several papers from Greek and Italian sources (Abstracts Nos. 1402, 1403, 1404, 1407, 1438), which discuss the properties and uses of natural pozzolanas. Co-operative research in progress at the Building Research Station on the production of artificial pozzolanas by burning clays and shales promises valuable results, which may, indeed, lead to the establishment of new industries in Scotland and England.

The reports of the discussion at the recent meeting of the British Association will have made the conception of a scale of loudness familiar to many. This device for evaluating human sensations was found indispensable in investigations of the acoustic properties of materials. In America, the need has arisen for some means of quantitatively expressing the intensity of the sensation of motion. Abstract No. 1495 summarises a paper presented at the First Congress of the International Association for Bridge and Structural Engineering, in which the author endeavours to calculate the vibrations set up in skyscrapers and other tower-like buildings by investigating their elastic properties. An example is given of a method of calculating the static deflection for any existing tower. This method, however, does not provide a co-efficient of stiffness which can be used for comparing two towers having different periods of vibration. In order to compare two structures for practical purposes it is necessary to find by experimental psychology what function of the static deflection and period will give approximately a measure of the sensory intensity of motion.

The failure of internal decorations is often the cause of great annoyance and considerable expense. It has been shown that such defects may be due to the mechanical action of moisture held in the material to which a paint coating is applied, or to inter-action between constituents of the paint and alkalis contained in the background, which can take place in the presence of moisture and free lime. Another source of failure is to be found in the growth of moulds and bacteria which feed upon the organic components of a painted surface. Considerable interest will therefore attach to a report, summarised in Abstract No. 1462, of a study of the effects upon certain bacteria and fungi of the incorporation of chlorinated phenolic compounds in paint vehicles. It was found that a paint containing this antiseptic was fatal to bacteria, and that this property persisted for at least two months, which was the period studied, and was unaffected by frequent washing with water or soap and water.

The section of Building Science Abstracts devoted to matters concerning the efficiency of buildings from the standpoint of the user contains a summary of the report on the Orientation of Buildings which has been drawn up by the Joint Committee of the Royal Institute of British Architects. This report has been reviewed at considerable length in the technical Press [including *The Builder*, September 16], but it would seem of interest to point out here that the appendices to the report are not published in the journal of the Institute, but are deposited in its library. These appendices contain a great deal of valuable data, and it is gratifying to note, in the preamble to the Committee's report, that their publication in pamphlet form may be considered if evidence is forthcoming of a demand for a sufficient number of copies to justify the expense. An American investigator (Abstract No. 1517), having completed a survey of nearly 100 American building codes, reports that all are deficient in directing attention to fundamental factors of natural lighting, and emphasises a need for exact data which the above-mentioned report may do much to satisfy.

Considerable prominence has been given in the daily Press to the recommendations of the Committee on New Industrial Development set up by the Economic Advisory Council (Abstract No. 1466). In the course of its report, the Committee reviews as a whole the machinery existing in this country for industrial research. The progress in one particular field of research, which is being prosecuted under the auspices of the Department of Scientific and Industrial Research, is summarised in the Report of the Building Research Board for the year 1931. Abstract No. 1464 gives a summary of the Board's report and of the contents of the Report of the Director of Building Research, which sets forth in detail the work carried out at the Building Research Station during this period.

The July issue of "Building Science Abstracts" contained summaries of two papers by the Director of Building Research which stressed the essential value of co-operation between scientist and technician in attempting the solutions of problems relating to building materials and their uses. The August issue, now in the press, contains an informative abstract (No. 1405) of a third paper, read by Dr. Stradling at a meeting of the Cast Concrete Products Association, in which the same theme is further developed. Following a reference to the constitution and aims of the mediæval craft gilds (or guilds), the need is urged for a reawakening of their co-operative spirit in the building industry, particularly as regards community of interest between the scientific investigator and the practical man. Instances are cited which demonstrate that scientific research has yielded results of direct and important value to the technician in concrete. Laboratory investigation has shown, for instance, that shrinkage movements do not cease with drying out, but continue for long in hardened concrete owing to reaction between atmospheric carbon dioxide and the hydrated cement, and that it is this further movement which is the major cause of crazing and other troubles.

NEW BUILDINGS IN LONDON

Bromley.—DAIRY.—The Express Dairy Co., Tavistock-place, W.C.1, propose new dairy premises at Walter's-yard. Plans, which have been passed by the T.C., have been prepared by Mr. Smallwood, at Head Office.

Bromley.—SCHOOL.—Plans for additions to the Roman Catholic elementary school, Plaistow-lane, prepared by Mr. J. H. Beart Foss, F.R.I.B.A., 9, The Common, Ealing, W.5, have been passed by the Town Council. The scheme is temporarily in abeyance, but it is hoped that it will go forward shortly. No contract has yet been placed.

Bromley.—SHOPS.—A tender of Messrs. David Kenn and Sons, of Bexley, at £1,462, has been recommended for acceptance by the Bromley T.C. for the erection of two shops in Holmcroft-way. A full list of tenders will be found in our "Tenders" pages. The architect is Mr. J. M. Colvin, L.R.I.B.A., Broadway House, The Broadway, Bromley.

Bromley.—STORES.—A site in Widmore-road has been acquired by the South Suburban Co-operative Society, Ltd., London-road, Croydon, for departmental stores. Messrs. Bethell and Swannell, 16a, John-street, Adelphi, W.C.2, are the architects. No contracts have been placed yet.

Carlton-gardens.—OFFICES.—No. 4, Carlton-gardens is to be demolished and new buildings erected on the site from the designs of Sir Reginald Blomfield, R.A., 1, New-court, Temple, E.C.4. It will be occupied by Messrs. Pinchin, Johnson and Co., Ltd. The building will contain seven stories above the pavement level, the two upper stories being stepped back from the fronts. The site overlooks the Mall. No building contracts have yet been placed.

Croydon.—HOUSES.—Mr. H. G. Palmer, Estate Office, Waddon Court-road, Waddon, is erecting 128 houses and garages on the Waddon Court estate. Mr. H. Macintosh, F.R.I.B.A., 1, Imperial Building, East Croydon, is the architect.

Croydon.—HOUSING.—For 90 houses on the Ham Farm housing estate, the Borough Engineer of the Council has been instructed to invite tenders.

Croydon.—SHOPS.—Plans have been prepared by Messrs. Burcotes, Ltd., estate agents. Lower Addiscombe-road, Addiscombe, for a block of four shops with flats. No contracts have been placed yet.

Edmonton.—FACTORIES.—The U.D.C. has approved plans for erection by Commercial Structures, Ltd., 61, City-road, E.C.1, of extensions to the factory at the west end of Bridport-road; store building at Messrs. Rayner's factory, Commercial-road; and a factory building in Shaftesbury-road.

Greenwich.—HOUSES.—A further part of the St. German's estate is to be developed by the erection of about 60 houses in Kidbrook Park-road, S.E. The builders are Messrs. Lincoln, Darby and Co., Tudor House, Eltham High-street, S.E.9. The plans have been prepared by Messrs. Sykes and Pomfret, 8, Park-place, Eltham, S.E.

Hackney.—REPAIRS.—The Hackney B.C. recommend Messrs. Dove Bros., Cloudesley-place, N.1, for carrying out repairs to Hackney old church tower, in accordance with the specification and instructions of Mr. A. R. Powys, A.R.I.B.A., 20, Buckingham-street, W.C.2.

Hyde Park-lane. — RESIDENCES. — Messrs. Rowe and Binns, 23, Bloomsbury-square, W.C.1, are the architects, and Messrs. C. Miskin and Sons, Ltd., 21, Bedford-row, W.C.1, and Romeland, St. Albans, are the builders for three residences.

Ilford.—SCHOOL.—The T.C. are to erect a new school building, to be called "Fairlop School," on the site situated between Tomswood Hill, Colvin-gardens, and Fencepiece-road, Barkingside. Mr. L. E. J. Reynolds, architect to the Education Committee, has prepared the plans. The builders are Messrs. G. H. Miller and Co., Sheridan Works, Thorpe-road, Forest Gate, E.7.

Knightsbridge.—FLATS.—Lord Ancaster has sold his London residence, Eresby House, in Rutland-gate, S.W., to interests who have in view the demolition of the property and the erection of a large block of high-class flats. Plans are in course of preparation and demolition operations will commence shortly. Messrs. John D. Wood and Co., estate agents and surveyors, 23, Berkeley-square, W.1, are acting for the promoters.

Lime-street. — REBUILDING. — Mr. Gervase Bailey, King's Buildings, Smith-square, S.W.1, and Mr. G. Thrale Jell, 20, Hanover-square, W.1, have prepared plans for erection of a modern block on part of the site of the Pewterers' Hall. The work is for the Pewterers' Co., 15, Lime-street, E.C.3, and will be carried out by Messrs. E. D. Winn, 36, Wilton-place, S.W.1. Demolition work is now in hand.

Oxford-street. — RECONSTRUCTION. — Also alterations are to be effected to the showroom premises of Messrs. John Lewis and Co., Ltd., drapers. The contract will be carried out by the Building Department, Peter Jones, Ltd., Sloane-square, S.W.3. Steelwork will be supplied by Messrs. H. Young and Co., Ltd., Thorneycroft House, Smith-square, S.W.1.

Paddington.—REBUILDING.—A contract for excavation and demolition has been placed with Messrs. Henry Boyer, Ltd., Terminus Wharf, Paddington Basin, W.2, in connection with the rebuilding of a large block of business premises in Praed-street, W.2. The building contract has been secured by Messrs. Y. J. Lovell and Son, 6, Bathurst-street, Bayswater, W.2. The architects are Messrs. Bomer and Gibbs, 84, Grosvenor-street, W.2.

Pinner.—SHOPS.—Plans have been prepared for a block of 12 shops, with self-contained flats, on the Tithe Farm estate, Alexandra-avenue. The builders are Messrs. T. F. Nash, Ltd., Rayners-lane, Pinner.

Poplar. — ADDITIONS. — The B.C. has approved plans submitted by Mr. J. E. Jenkin, 36, Queen Anne's Gate, S.W.1, for addition to Messrs. Pinchin, Johnson and Co., Ltd.'s premises in Wharf-road, E.14.

Poplar.—FLATS.—The Borough Council have applied to the L.C.C. for sanction to borrow £29,976 for the erection of 48 flats and two cottages on a site at Judkin-street and Roffey-street.

Reigate. — COTTAGES. — The R.D.C. has accepted the tender of Messrs. Bartley and Ward, Ltd., Three Bridges-road, Crawley, for erection of 12 non-parlour cottages, at £4,297.

Seymour-place. — EXTENSIONS. — Messrs. Mewes and Davis, 22, Conduit-street, W.1, are the architects for extensions to the West End Synagogue. The lowest tender has been submitted by Messrs. W. H. Gaze and Son, Ltd., High-street, Kingston-on-Thames, builders.

Southwark.—OFFICES.—Mr. Joseph Emberton, F.R.I.B.A., 136, Regent-street, W.1, is the architect for a new block of offices at Bankside, for Messrs. Beck and Pollitzer, of Queen Victoria-street, E.C.4. The superstructure will be carried out by Messrs. E. D. Winn, 36, Wilton-place, S.W.1.

Stanmore. — CHURCH HALL. — Plans submitted by the Rev. A. M. Bashford on behalf of the London Diocesan Fund, 33, Bedford-square, W.C.1, for the erection of a church hall at Dale-avenue, on the Berridge Estate, have been approved by the Hendon Rural Council. Mr. M. T. Gordon Jackson, F.R.I.B.A., 7, Great James-street, Bedford-row, W.C.1, is the architect.

Stepney. — BUILDING. — The B.C. are inviting tenders for the construction of lavatory accommodation at the Limehouse electricity generating station. The Borough Engineer and Surveyor is Mr. Bernard J. Belsher, F.R.I.B.A.

Stepney.—REBUILDING.—The contract for the rebuilding of 54, Bedford-street, E.1, has been placed with Mr. H. E. Jerram, Sandford Works, Sandford-road, E.6. The plans have been prepared by Messrs. Wheeler and Wheatley, 59, Windsor-road, Forest Gate, E.

St. Pancras.—REBUILDING.—A commencement is to be made upon the rebuilding of business premises at 22, 24 and 26, Osnaburgh-street, N.W.1. Messrs. W. H. Gaze and Son, Ltd., High-street, Kingston, have submitted the lowest estimate. The plans have been prepared by Mr. G. Vernon, A.R.I.B.A., 19, Russell-square, W.C.1, on behalf of the Freehold Estate Development Co., 31, St. James's-street, S.W.1.

Waddon.—HOUSING.—The Croydon C.B. has received plans from the Borough Engineer and instructed him to invite tenders for the erection of 181 houses and 12 flats on the third section of the Waddon housing estate.

Walham Green.—STORES.—A block of property at 1-7, Jerdan-place and 2-14, Vanstone-place, S.W., has been acquired by the London Co-operative Society, Ltd., 54, Maryland-street, Stratford, E., for reconstruction and equipment as departmental stores. The work will be carried out by the Society's Building Department, under the direction of the Works Manager, Mr. A. Hulbert, Gladding-road, Ilford, who has also been responsible for the plans.

Yiewsley.—FACTORY.—The Yiewsley and West Drayton U.D.C. have approved plans for additions to the Anglo-Swiss Screw factory at Trout-lane, West Drayton. Plans have been prepared by Mr. H. S. Goodhart-Rendel, F.R.I.B.A., 60, Tufton-street, S.W.1, and a contract has been placed with Messrs. W. J. Dickens, 19, Broadway, Ealing, W.5. Work has been commenced.

NEW CINEMAS

Aberystwyth.—Extensive alterations are to be made to the Imperial cinema, which is to be entirely reconstructed. The owner is Mr. W. J. Evans, 3, Queen's-road.

Ayr.—A new cinema is to be erected at Prestwick-road, for Mr. Wm. Ross, 196, Prestwick-road, Ayr.

Carlisle.—A contract for reconstruction of the Palace Theatre, Botchergate, for conversion for a super cinema for the MacNaughton Vaudeville Circuit, has been placed with Messrs. J. H. Reed and Sons, of Carlisle. Plans have been prepared by Mr. S. W. B. Jack, architect, of Carlisle, and work will be carried out under the supervision of Mr. C. W. Davenport, Ingle Nook, Stockton Heath, Warrington, Surveyor to the Circuit.

Eastbourne.—The contract for the proposed "Luxor" cinema, to be erected in Pevensey-road and Terminus-road, at a cost of about £50,000, has been placed with Messrs. G. Bainbridge and Son, 139, Terminus-road, Eastbourne. The plans have been prepared by Messrs. J. Stanley Beard and Clare, F. and A.R.I.B.A., 101, Baker-street, W.1. The building will hold 1,700.

Oswestry.—The directors of the King's Theatre, New-street, are proposing to rebuild. Plans are being prepared by Messrs. H. G. Bradley and Clarke, architects, 10A, Temple-row, Birmingham. The contract has been let to Messrs. Treasure and Son, Ltd., Shrewsbury.

South Shields.—Messrs. Fowler and Whitfield, 6, Cornwallis-street, Barrow-in-Furness, have taken out plans for alterations to the front of the Imperial Cinema in Denmark-street for Mr. Frank Forster. The plans have been deposited with the local authority for approval.

Southwell, Notts.—It is understood that Mr. A. Brocklehurst, F.R.I.B.A., 10, Norfolk-street, Manchester, is engaged upon the preparation of plans for the erection of a hall and cinema at Oxton, Southwell, Notts.

West Wickham.—Mr. W. C. Dawes, proprietor of the new "Queen's" cinema, Queen's-road, Bayswater, W., has acquired a site in Station-road, where it is proposed to build a cinema to seat 1,000 persons. Plans will be put in hand shortly. Messrs. J. Stanley Beard and Clare, F. and A.R.I.B.A., 101, Baker-street, W.1, have planned previous cinemas for Mr. Dawes.

Worksop.—The R.D.C. has approved plans for alterations to the Haworth Cinema.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1932.

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors.]

	Masons.	Bricklayers.	Carpenters Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Accrington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Aldershot	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Alfreton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Alnwick	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Altrincham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ashford (Kent)	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Ashington	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Ashton-under-Lyne	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Aylsham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Banbury	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Barnsley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Barnstaple	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Barrow-in-Furness	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Barry	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Basingstoke	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bath	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bedford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Berwick	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bexhill	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Birkenhead	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Birmingham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bishop Auckland	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Blackburn	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Blackpool	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bognor Regis	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Bolton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bournemouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bradford	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bradford-on-Avon	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Braintree	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Brentwood	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bridgwater	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Bridlington	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Brighton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bristol	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bromsgrove	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bromyard	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Bungay	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Burnley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Burton-on-Trent	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Bury St. Edmunds	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Buxton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Cambridge	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Canterbury	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Cardiff	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Carlisle	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chatham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Chelmsford	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Cheltenham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Chester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chesterfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Chorley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cirencester	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Clacton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Colchester	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Coventry	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Cranbrook	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Crewe	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Cromer	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Darlington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Deal	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Denbigh	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Derby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Devizes	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Dewsbury	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Doncaster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Dorchester	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Dorking	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Dovercourt	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Driffield	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Droitwich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Dudley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Durham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Eastbourne	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
E.Glam.(Mon.Val.)	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Ely	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Exeter	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Exmouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Fakenham	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Felixstowe	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Folkestone	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Frome	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Glomop	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Gloucester	1/5	1/5	1/5	1/5	1/5	1/5	1/4	1/0½
Godalming	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Goole	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Gosport	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Grantham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Gt. Yarmouth	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Grimsby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Guildford	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Halifax	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Harpenden	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Harrogate	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hartlepools	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Harwich	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Hastings	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Hatfield	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hednesford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Hereford	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Herne Bay	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Hertford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Hitchin	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Hoddesdon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Holt	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Huddersfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hull	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Hunstanton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11
Huntingdon	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Isle of Wight	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Ipswich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Keighley	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Kettering	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Kidderminster	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Kings Lynn	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Lancaster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leamington Spa	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Leeds	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leicester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leighton Buzzard	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Lichfield	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Lincoln	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Littlehampton	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Liverpool	1/7½	1/7½	1/7½	1/8½	1/7½	1/7½	1/7½	1/2½
Llandudno	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Llanelly	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
London—								
12 m. radius	1/7½	1/7½	1/7½	*	1/7½	1/7½	1/6½	1/2½
12-15 m. radius	1/7	1/7	1/7	*	1/7	1/7	1/6	1/2½
Loughborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Lowestoft	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Luton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Macclesfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Maidstone	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Malvern	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Manchester	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Mansfield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Margate	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Market Harborough	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Matlock	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Melton Constable	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Melton Mowbray	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Merthyr Tydfil	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Middlesbrough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Newark	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Newbury	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Newcastle-on-Tyne	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Newcastle-u-Lyme	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
New Forest	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Newmarket	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Newport, Mon.	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Northampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Norwich	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Nottingham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Nuneaton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Oakham	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Oldham	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Oxford	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Paignton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Peterborough	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Plymouth	1/6	1/6	1/6	1/6	1/6	1/6	1/5	1/1½
Pontypridd	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Portsmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Preston	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Ramsgate	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Reading	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Redcar	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Redditch	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Reigate	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Retford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Ripon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Rochdale	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Rochester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Rugby	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Saffron Walden	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
St. Albans	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
St. Helens	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sawbridgeworth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Saxmundham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
Scarborough	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Sevenoaks	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Sheffield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Shrewsbury	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Sittingbourne	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Southampton	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Southend-on-Sea	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Southport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
South Shields	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stevenage	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Stockport	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stockton-on-Tees	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stoke-on-Trent	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Stourbridge	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Stourport	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Stowmarket	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Stratford-on-Avon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Stroud	1/4	1/4	1/4	1/4	1/4	1/4	1/3½	1/-
Sunderland	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Swaffham	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Swansea	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Swindon	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/3½	1/0½
Tamworth	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Taunton	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Thetford	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Torquay	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Totnes	1/4	1/4	1/4	1/4	1/4	1/4	1/3½	1/-
Trowbridge	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Tunbridge Wells	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Uttoxeter	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/-
Wakefield	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Walsall	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Walsden	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Warminster	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/1½	11
Warrington	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Warwick	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wells (Norfolk)	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	1/1½	10½
Welwyn Gar. City	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
West Bromwich	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Weston-super-Mare	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Weymouth	1/3	1/3	1/3	1/3	1/3	1/3	1/2	11½
Whitby	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Wigan	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Winchester	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	11½
Windsor	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wisbech	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Wolverhampton	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Woodbridge	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	1/2½	11
Worcester	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Worksop	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Worthing	1/3	1/3	1/3	1/3	1/3	1/3	1/3	11½
Wrexham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Wycombe	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wymondham	1/2	1/2	1/2	1/2	1/2	1/2	1/2	10½
York	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½

*The rate recognised by the National Association of Plasterers, Granolithic and Cement Workers, as and from the 1st June, 1932, is 1/9 per hour.

For Building Trade wages in Scotland, see page 578.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given is the latest date when the tender, or the names of those willing to submit tenders, may be sent in, the name and address at the end is the person from whom or place where quantities, forms of tender, etc., may be obtained.

Following is a list of abbreviations:—Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E

BUILDING, PAINTING, ELECTRIC LIGHTING, HEATING, etc.

OCTOBER 5.

Aberdeen.—Houses.—2 blocks of dwellings at Lumphanan, for C.C. Separate trades. A. H. L. Mackinnon, architect, 245, Union-st., Aberdeen.

Clacton. — Conveniences. — Opposite Connaught-gdns., East Cliff, for U.D.C. W. Aiston, S. Dep. £2.

Co. Limerick.—Schools.—Erection and completion of technical schools at Newcastle West, and Hospital, Co. Limerick, for Co. Limerick Vocational E.C. Sheaham & Cleary, architects Cecil-chams., Limerick.

Goole.—Painting.—Outside of secondary school. W. T. Silvester, clerk to governors, Estcourt-chambers, Goole.

Pelletstown.—Annexe.—Medical annexe at Auxiliary, Pelletstown, Co. Dublin, for Dublin Board of Assistance. G. L. O'Connor, architect, Mansion House-chams., 27, Dawson-st., Dublin. Dep. £3 3s.

Reading, Bucks. — Telephone Exchange. — At Earley, for H.M.O.W. Contracts Branch, H.M.O.W., King Charles-st., London, S.W.1. Dep. £1 (cheques payable to the Commissioners, H.M. Office of Works).

Wellington.—Painting.—External painting of 42 houses at Brookdale and 8 at Trench, for R.D.C. J. V. Lander, clerk, 48, Walker-st.

OCTOBER 6.

Crieff.—Houses.—11 blocks of 4 houses each for T.C. C. E. Colville, T.C. Dep. £2 2s.

Dublin. — Adaptations. — At Malahide Garda Siochana Station, for Commissioners of Public Works. T. Cassedy, Office of Public Works, Dublin. Dep. £1.

Dublin. — Reroofing. — And plastering at St. Patrick's Hall, Dublin Castle, for C.P.W. T. Cassedy, Runai, Office of Public Works, Dublin. Dep. £1.

Harrogate.—Building.—Tea house and promenade, Valley-gardens, for T.C. C. E. Rivers, B.E. and S. Dep. £2 2s.

London.—Heating.—Low pressure hot water heating at Employment Exchange, Lewisham, S.E., for H.M.O.W. Contracts Branch, King Charles-st., London, S.W.1. Dep. £1.

OCTOBER 7.

Manchester, Newton Heath. — Flats. — For City of Manchester. Housing Director, Town Hall. Dep. £2 2s.

Stromness.—Houses.—12, Ness-st., for T.C. J. E. P. Robertson, T.C.

Wetwang.—House.—House and farm buildings on Fridaythorpe-rd., Wetwang, for Small Holdings and Allotment Sub-committee of East Riding C.C. H. T. Tate, County Land Agent, County Hall, Beverley.

OCTOBER 8.

Ayr.—Houses.—40, Kilmaurs housing scheme—Yardside, for C.C. William Reid, architect, 14, Wellington-sq., Ayr.

Broadstairs and St. Peters.—Pavilion.—At Garden-on-the-Sands, for U.D.C. H. Hurd, S. Dep. £2 2s.

Depwade.—Cottages.—104 cottages in 25 parishes, for R.D.C. F. H. Bowden, Long Stratton. Dep. £1.

Edinburgh. — Building. — Public washhouse at Dalry, for T.C. E. J. MacRae, A.R.I.B.A., City Architect.

Glamorgan.—Wiring.—Wiring and fitting new admission block, convalescent home, nurses' hostel, and medical officer's residence at Penyfai, near Bridgend, for electric lighting and power, for C.C. W. Gough Jenkins, Clerk to the Committee of Visitors, Glamorgan County Hall, Cardiff.

Newmarket.—Houses.—For (a) 8 at Ashley, (b) 8, Borough Green, (c) 6, Bottisham, (d) 6, Looe, (e) 2, Snailwell, (f) 10, Soham, (g) 6, Swaffham Pride, (h) 4, Wicken, for Newmarket R.D.C. A. E. Austin, Council Offices, White Lodge, Exning-rd., Newmarket. Dep. £2 2s.

OCTOBER 10.

Athlone.—School.—For County Westmeath Vocational E.C. O. Doyle, architect, Surveyor's Office, Courthouse, Athlone. Dep. £5 5s.

Basford.—Houses.—18 non-parlour type houses in pairs together with drainage, paths and fences, in parish of Kimberley, for R.D.C. S. Maylan, E. and S. Dep. £2 2s.

Carlisle.—Houses.—For the R.D.C. Clerk, 7, Victoria-pl., Carlisle. Dep. £1 1s.

***Croydon.**—Erection.—Of iron fencing at Littleheath Woods, for C.B. of Croydon. Town Clerk, Town Hall, Croydon.

Dublin.—Dwellings.—32 flat dwellings at Cuffe-st. and Upper Mercer-st., Crabbe-lane area, for Corporation. Housing Architect. Dep. £5 5s.

East Kilbride —Alterations.—To clubhouse, for Committee of Golf Club. Hon. Secretary.

Forehoe.—Houses.—For 30 houses in various parishes, for R.D.C. L. Standley, clerk, Wymondham, Norfolk. Dep. £1.

Ilkeston.—Houses.—156, Heanor-rd. housing estate, for T.C. B.S.

Ipswich.—Convenience.—In Recreation ground at Gainsborough-lane estate, for C.B. E. McLauchlan, B.S.

King's Lynn.—Houses.—41 houses, non-parlour type, for T.C. J. C. Matthew, A.M.I.C.E., B.S. Borough Surveyor's Office, Town Hall, King's Lynn. Dep. £1 1s.

Lancaster.—Block.—New dormitory block at Royal Grammar School. Austin & Paley, architects. Castle Park, Lancaster.

London.—Building.—Lavatory accommodation at Limehouse electricity generating station, for Stepney B.C. Bernard J. Belsher, F.R.I.B.A., B.E. and S. Dep. £3.

North Elmsall. — House. — Whole or separate tenders, new school and caretaker's house at Harewood-lane, North Elmsall, for West Riding C.C. Education Officer, County Hall, Wakefield.

Southampton.—Shelter.—At the Junction, London-rd., for T.C. Borough Engineer's Office, 33-5, French -st. Dep. £2 2s.

Upholland.—Houses.—For U.D.C. A. Hunt, S. Dep. £1 1s.

Wallasey.—Slating.—And repairs to the roofs of the tram and bus depot, for T.C. B.E. and S., Town Hall. Dep. £1 1s.

***Walthamstow.**—Hospital.—Maternity hospital, comprising two new detached buildings, the adaptation of two existing buildings, new roadways, drainage, etc., at "Thorpe Coombe," Forest-rd., for T.C. D. Furness, B.E. and S. Dep. £2 2s.

OCTOBER 11.

Barnes.—Alterations.—To boilerhouse, Electricity Works, Mortlake, for U.D.C. F. P. Kindell, E. and S. Dep. £1 1s

Glasgow.—Buildings.—Temporary school buildings at Croftpark-av., Croftfoot, S.4, for T.C. Education Offices (Property Department), 129, Bath-st. Dep £2 2s.

Kilkenny. — Houses. — 22 working-class houses in Fair Green, for Corporatoon. R. F. Bowen, Borough Surveyor. Dep. £5.

Sheffield.—Heating.—Accelerated low-pressure hot water heating at Employment Exchange, for H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1.

Various Districts. — Works and Repairs. — To public buildings, for Contracts Branch, H.M.O.W., King Charles-st., London, S.W.1. Dep. 10s. 6d. (payable to the Commissioners, H.M. Office of Works).

OCTOBER 12.

***Clacton-on-Sea.**—Erection of Dining Hall at County High School, for Essex C.C. County Architect, County Hall, Chelmsford. Dep. £1 1s.

Walsall.—Sanatorium.—20-bed block sanatorium at Goscote-lane, including drainage, fencing, gates, etc., for Corporation. J. Taylor, B.E.

Walsall.—House.—Detached house at proposed sanatorium at Goscote-lane for C.B. J. Taylor, B.E. and S. Dep. £3 3s.

York. — Post Office. — At Fishergate, for Contracts Branch, H.M.O.W., King Charles-st., London, S.W.1. Dep. £1 1s. (cheques payable to the Commissioners, H.M. Office of Works).

OCTOBER 13.

London.—Heating.—Accelerated low-pressure hot water heating at (1) Stamford Hill, N., Telephone Exchange; (2) Bradford, Yorks, Employment Exchange, for H.M.O.W. Contracts Branch, King Charles-st., S.W.1. Dep. £1 each.

OCTOBER 14.

***Southend-on-Sea.**—Alterations and additions to Rochford Institution, for C.B. of Southend-on-Sea. Clerk, Municipal Buildings, Southend-on-Sea. Dep. £2.

Various Districts. — Works and Repairs. — To public buildings, for Contracts Branch, H.M.O.W., King Charles-st., London, S.W.1. Dep. 10s. 6d. (payable to the Commissioners, H.M. Office of Works).

OCTOBER 15.

Hampstead. — Conversion. — Of Abbeydale-mans., Haverstock-hill, N.W., into 10 flats, A. G. D. Halls, of Child & Halls, architects, 1, Montpelier Vale, Blackheath, S.E.3. Dep. £2 2s.

Salford.—Building.—Demolition and re-erection of Regent-rd. police station, for T.C. City E. Dep. £3 3s.

Wakefield.—Shops.—Two lock-up shops on Eastmoor estate, for T.C. Percy Morriss, architect, Town Hall.

OCTOBER 17.

Bristol.—Subways.—Construction of subways, and other works, at Bristol (Temple Meads) Station, for G.W.R. F. R. E. Davis, secretary, Paddington Station, London, W.2.

Cowbridge.—Houses.—Houses for agricultural workers on sites:—(*a*) parish of St. Athan, 4 houses; (*b*) parish of St. Hilary, 2 houses; (*c*) parish of St. Mary Hill, 2 houses, for R.D.C. Edward Loveluck, A.R.I.B.A., 12, Dunraven-pl., Bridgend. Dep. £3 3s.

Cullompton.—Offices.—New offices, for Devon C.C. County Architect's Office, 97, Heavitree-rd., Exeter.

Prestwich, near Manchester.—(County Mental Hospital), alterations and additions. Clerk, County Offices, Preston. Dep. £5 5s.

***Waltham Abbey.**—Houses.—On Sewardstone-rd. site, for Waltham Holy Cross U.D.C. Engineer and Surveyor, Town Hall, Waltham Abbey.

OCTOBER 18.

***Winchester.**—Erection.—Of 3 homes for 50 patients, 2 workshop blocks and alterations in mansion and laundry at Coldeast Colony, Sarisbury Green, for Hampshire C.C. County Architect, The Castle, Winchester. Dep. £1 1s.

OCTOBER 19.

Mallon. — Shed. — Engine shed, for Great Southern Railway. A. W. Bretland, Westlandrow Station, Dublin. Dep. £3 3s.

Northleach.—Houses.—Four non-parlour type at Eastington-rd., for R.D.C. A. D. Ward, clerk, Northleach, Glos. Dep. £1 1s.

OCTOBER 21.

***Brentwood.**—Mental Hospital.—Additions to farm buildings, for Essex C.C. County Architect, County Hall, Chelmsford. Dep. £1 1s.

OCTOBER 22.

***Buntingford.**—Houses.—In Baldock-rd., for the Buntingford R.D.C. Clerk, Council Offices, Buntingford, Herts. Dep. £2 2s.

***Hemel Hempstead.**—Cottages on Council's housing site, Flaunder-lane, Bovingdon, for Hemel Hempstead R.D.C. Clerk, Broadway Offices, Hemel Hempstead, Herts. Dep. £3 3s.

OCTOBER 23.

Turkey. — Pavilion. — Construction works in the large new pavilion of Ankara Model Hospital. Apply, Ministry of Health.

OCTOBER 25.

Cheriton.—Houses.—23 non-parlour type on Oaks Farm estate, for U.D.C. A. S. Lilley, E. and S.

OCTOBER 29.

Glasnevin.—Heating.—New heating chamber and fuel store at Colaiste Caoimhin, Glasnevin, Dublin, for Commissioners of Public Works. T. Cassedy, Public Works, Dublin. Dep. £1.

NOVEMBER 1.

***Various.**—Works and repairs to public buildings, for Contracts Branch, H.M.O.W., King Charles st., London, S.W.1. Dep. £1 1s.

NOVEMBER 4.

***Various.**—Repairs and works to public buildings, for Contracts Branch, H.M.O.W., King Charles-st., London, S.W.1. Dep. £1 1s.

NO DATE.

London.—Cinema.—Specifications and quantities ready shortly. Box 153, "The Builder," 4, Catherine-st., Aldwych, W.C.2.

***Bromley, Kent.**—Shops with flats over.—At Bromley. Box V.108, Willings, 86, Strand, W.C.2.

Cardiff.—Extensions.—Extensions of Merrett's bakery, Newport-rd. Henry Budgen & Co., architects, 95, St. Mary-st. Dep. £2 2s.

Cromtwrch.—Redecorations.—At various police buildings, for Breconshire C.C. H. C. W. Strickland, County Architect, Watter Offices, Brecon.

Frome.—Alterations.—To creamery, for West Park Dairy Co., Ltd. J. A. Beynon, architect, Nunney-rd.

Horbury.—Painting.—External, of various properties, for U.D.C. W. Sugars, E. and S.

Lisnaskea.—Hall.—Recreation hall in Lisnaskea J. Livingstone, Castlebalfour, Lisnaskea, Co Fermanagh.

Penryn.—Alterations.—To warehouse premises for J. C. Annear & Co., Ltd. P. E. Stephens, chartered architect, Midland Bank-chams., Falmouth.

Skelmanthorpe.—Bungalows.—2, at Skelmanthorpe. H. Lodge, Huddersfield-rd.

Tenterden.—Houses.—Seven pairs of semi-detached houses on seven sites, for R.D.C. F. O. Marchant, A.R.I.B.A., 10, Taviton-st., London, W.C.1. Dep. £2 2s.

MATERIALS, etc.

OCTOBER 6.

Leeds.—Setts.—1,500 tons of granite setts, for T.C. E. W. Cockerlyne, Highways E., 155, Kirkstall-rd.

OCTOBER 8.

Hertford.—Highway Materials.—For T.C. B.E. and S.

OCTOBER 15.

Egypt.—Paints, etc.—Paints, etc., for Tanzim Department, Cairo. Dept. of Overseas Trade, S.W.1. Ref. B.X. 7423.

OCTOBER 24.

South Africa.—Paints, etc.—For South African Railways and Harbours Administration. Dept. of Overseas Trade, Westminster, S.W.1. (Ref. B.X. 7407.)

NOVEMBER 7.

Singapore.—Tubes.—Galvanised wrought-iron unsocketed tubes, for Singapore Municipality. Dept. of Overseas Trade, S.W.1. (Ref. G.X. 11866.)

Singapore.—Fittings.—Supply of malleable iron fittings and miscellaneous special fittings for Singapore Municipality. Dept. of Overseas Trade, S.W.1. (Ref. G.X. 11865.)

ENGINEERING, IRON AND STEEL.

OCTOBER 5.

Carmarthenshire.—Roadworks, etc.—Roadworks at Pen-y-Morfa landslide, on Llangunnor-rd., demolition of Carmarthen bridge, and demolition of Dryslwyn bridge, for C.C. T. W. Wishlade, C.S., The Castle, Carmarthen. Dep. £5.

OCTOBER 6.

Hawksworth.—Repairs.—To Car Dyke bridge, for Notts C.C. J. C. Haller, C.S., Shire Hall, Nottingham.

Twickenham. — Drainage. — Sewers and other works in Hospital Bridge-rd. and Percy-rd, for T.C. Gilbert R. King, B.E. and S. Dep. £2 2s.

OCTOBER 8.

Bowland.—Widening.—Widening and strengthening of Trough bridge in Over Wyresdale, on unclassified secondary road No. 48, leading from Lancaster to the Trough of Bowland, for Lancashire C.C. County Surveyor and Bridgemaster, County Offices, Preston.

Near Holbeach.—Bridge.—Reinforced concrete bridge, width between parapets 136 ft., length 45 ft., and span of 6 ft., and contingent works over Whaplode river, near Holbeach, for Holland (Lincolnshire) C.C. Wm. A. Rogerson, C.S., County Hall, Boston. Dep. £3 3s.

Near Long Sutton.—Bridge.—Reinforced concrete bridge, width between parapets 96 ft., length 29 ft., and span 8 ft., and contingent works over the Lutton Drain, near Long Sutton, for Holland (Lincolnshire) C.C. Wm. A. Rogerson, C.S., County Hall, Boston. Dep. £3 3s.

OCTOBER 10.

Hendon.—Extensions.—And alterations to south of Brent outfall works, for U.D.C. A. O. Knight, E. Dep. £5 5s.

Little Baddow.—Reconstruction.—Of small bridge known as Cow bridge, on Boreham-Little Baddow-rd. in parish of Little Baddow, for Essex C.C. R. H. Buckley, County Surveyor's Office, Chelmsford.

OCTOBER 11.

Barnes.—Sewer.—12-in. soil relief sewer, a 9-in. surface water sewer, and provision and erection of ejector, compressor, pumping machinery and pumping chamber, Lonsdale-rd., Barnes, for U.D.C. F. P. Kindell, E. and S. Dep. £2 2s.

OCTOBER 12.

Hemsworth.—Sewage pumping plant.—Automatic electric pumping plant, screening plant, meter, etc., at the South Elmsall Sewage Disposal Works, near Pontefract, for R.D.C. W. T. Lynam, A.M.I.C.E., E. and S., Market-chams., Hemsworth, near Pontefract.

OCTOBER 13.

Yeovil.—Water supply.—Construction of a reinforced concrete reservoir, and the laying of about 5,000 yds. of 4 in., 3 in. and 2 in. mains, etc., for R.D.C. N. G. Fish, S., South Petherton. Dep. £1.

OCTOBER 15.

Egypt.—Extensions.—Supply of pumps, piping, electric motors, filtration plant, etc., for Egyptian Ministry of Interior. Dept. of Overseas Trade, Westminster, S.W.1. Ref. G.X. 11836.

Ingleton.—Bridge.—New bridge to carry Keighley and Kendal County road over River Greta at Ingleton, for West Riding C.C. West Riding Surveyor, County Hall, Wakefield. Dep. £1

OCTOBER 18.

Middlesex.—Sewerage.—For West Middlesex main sewerage schemes in Northolt, Greenford, and North Ealing branch, for C.C. Dodd & Watson, engineers, 3, Central-bldgs., Westminster, S.W.1. Dep. £5 5s.

OCTOBER 24.

South Africa. — Bridgework. — Structural bridgework for New Buffalo River Bridge, East London, for South African Railways and Harbours Administration. Secretary to Tender Board, South African Railways Headquarter Offices, Johannesburg. (Ref. G. 11819.)

OCTOBER 31.

Egypt.—Waterworks.—Construction of a "chamber" on the new intake at the Waterworks at Mansourah, for Municipalities and Local Commissions Section. Dept. of Overseas Trade, S.W.1. Ref. G. 11875.

Uruguay.—Refinery. — Petroleum refinery, for Administration Nacional de Combustibles, Alcohol y Portland, at Montevideo. Dept. of Overseas Trade, Westminster, S.W.1. (Ref. A.X. 11394.)

DECEMBER 5.

India.—Reconstruction.—Of Nerbudda bridge at Broach, Bombay Presidency, India, for Bombay, Baroda and Central India Railway Co. S. G. S. Young, secretary, White Mansion, 91, Petty France, Westminster, S.W.1.

ROAD, SEWERAGE AND WATER WORKS.

OCTOBER 5.

Acton.—Road.—Reconstruction of Park Royal-rd. and Acton-lane (part of), N.W.10, with reinforced concrete and asphalt, for T.C. W. G. Cross, B.E. Dep. £2 2s.

Clacton. — Making-up. — Park-way, Uplands-rd., Kings-rd. (Wash-lane to Park-way), Arnold-rd. (made-up portion to Uplands-rd.), Coan-av. (sewering only), for U.D.C. Wm. Aiston, S.

Clacton.—Extension.—Drainage and paths in portion of cemetery, comprising laying of approximately 500 lin. yds. of 9-in. and 6-in. pipes and 1,500 super. yds. of tarsprayed gravel paths, with manholes, etc., for U.D.C. W. Aiston, S.

Hendon.—Sewer.—Main soil sewers in parishes of Harrow Weald, Great Stanmore and Little Stanmore, and manholes, etc., for R.D.C. H. W. Rackham, S. Dep. £3 3s.

Hove.—Making-up.—Of Park-av.; also Jesmond-rd., for T.C. T. R. Humble, B.S.

Peterborough.—Sewer.—Laying of a 9 in. dia. stoneware pipe sewer and other incidental works in New-rd. near junction with Crawthorne-rd., for T.C. City E. Dep. £2 2s.

Reading.—Improvements.—In Uplands-rd., comprising 1,750 sq. yds. of 7-in. concrete carriageway, tarred macadam footways and a surface water sewer, etc.; and in Wellington-av., comprising 1,000 sq. yds. of tarred macadam carriageway, with tarpaved footways, etc., for C.B. B.S. Dep. £2 2s.

Skirlaugh.—Sewer.—Laying of sewer in parish of Great Hatfield, for R.D.C. J. A. Andrews, E. Dep. £1.

Southend-on-Sea.—Pipes.—28 yds. lin. of 24-in. dia. cast-iron pipes and 74 yds. lin. of 12-in. dia. and 96 yds of 9-in. dia. glazed stoneware pipes in new road, Leigh-on-Sea, for C.B. R. H. Dyer, B.E. and S. Dep. £2.

Wanstead.—Reconstruction.—Laying about 5,307 super. yds. of asphalt paving on concrete in Hollybush-hill, together with relaying of kerbs and footpath work, for U.D.C. F. R. Gibbins, S.

OCTOBER 6.

Leeds.—Paving.—Kerbing, flagging, tar paving footpaths and carriageways, Broadway (Halton) (Pt.) Roundhay Mount (Pt.), Woodside View (Pt.), for T.C. Highways Engineer, 155, Kirkstall-rd. Dep. £1 1s.

Reading.—Improvements.—Of Uplands-rd., comprising 1,750 sq. yds. of 7-in. concrete carriageway, tarred macadam footways and a surface water sewer, etc., and in Wellington-av., comprising 1,000 sq. yds. of tarred macadam carriageway, with tar-paved footways, etc., for C.B. B.S. Dep. £2 2s.

Southend-on-Sea. — Making-up. — Cumberland-av., section 2, and Gordon-rd., and incidental works, for C.B. R. H. Dyer, B.E. and S. Dep. £1 each.

OCTOBER 7.

Oban.—Roadworks.—Roadwork, in connection with electricity undertaking, for T.C. Kennedy & Donkin, 6, Broadway, Westminster, S.W.1. Dep. £2 2s.

Slough.—Sewers.—1,600 yds. approximately of 12-in dia. stoneware sewer and 480 yds. approximately of 9-in. dia. stoneware sewer, together with manholes and appurtenant works, east and west of Horsemoor Green Junction, London Road, for U.D.C. A. Bromly, E.

OCTOBER 8.

Bexhill.—Making-up.—Of Holmesdale-rd., for T.C. B.S. Dep. £1 1s.

Wallingford.—Mains.—385 yds. of 3 in. cast-iron pipe water main extending from Pumping Station in Station-rd. to borough boundary in Wantage-rd., and work incidental thereto, for T.C. Fiddian & Deeley, engineers, 13, Church-st., Stourbridge. Dep. £1 1s.

OCTOBER 10.

Erith.—Sewering.—Supplying and laying 690 yds. 9-in. seconds quality glazed stoneware pipes, and kerbing and channelling, in granite, for distance of approximately 200 yds. lin., adjusting carriageway adjoining in tarred slag macadam, and supplying and laying of approximately 370 superficial yds. of flag-paving, in connection with widening of Westheath-rd., Abbey Wood, for U.D.C. H. Hind, E. and S. Dep. £1 1s.

Maldens and Coombe.—Roads.—Construction of South-lane (Eton-av. to Lynton-rd.), for U.D.C. S. Dep. £2 2s.

Teignmouth.—Roads.—Roads, sewers, and contingent works in connection with housing scheme on site adjoining Mill-lane, for U.D.C. F. W. Knight, surveyor and water engineer.

OCTOBER 12.

Bexley.—Making-up.—Of Ruskin-av., Welling, and Deepdene-rd., Welling, for U.D.C. G. A. Joy, S. Dep. £2 2s.

OCTOBER 13.

Middleton. — Resurfacing. — Of Durnford-st., Chapel-st., and John Lee Fold, for T.C. B.E. and S., Town Hall, Middleton.

OCTOBER 15.

Coulsdon and Purley.—Street works.—Making-up of Northwood-avenue (part of), Purley, for U.D.C. Gilbert A. Ballard, O.B.E., A.M.I.C.E., Council Offices, Brighton-rd., Purley. Dep. £1.

OCTOBER 19.

Weymouth and Melcombe Regis.—Resurfacing.—Also reconstruction of Buxton-rd., Wyke-rd., Westway-rd., for T.C. R. W. Vine, B.E. and S. Dep. £2 2s.

OCTOBER 24.

Beddington and Wallington.—Streets.—Improvement of 4 streets, for U.D.C. S. F. R. Carter, A.M.Inst.C.E., E. and S., 42, Woodcote-rd., Wallington, Surrey. Dep. £2 2s. (each street).

NO DATE.

Milford Haven.—Mains.—Supply and delivery of 6-in. bitumen lined steel mains and specials, for U.D.C. Gas and Water Engineer.

Milford Haven.—Main.—Laying water main between service reservoirs and Great North-rd., for U.D.C. E.

Public Appointments

OCTOBER 15.

***Doncaster.**—Clerk of Works.—At St. Catherines, Doncaster, by South-West Joint Board. Architect and Engineer, Municipal Offices, Rotherham.

FEDERATION OF HOUSE BUILDERS

THE National Federation of House Builders held their half-yearly conference at Blackpool from Monday. Mr. J. B. Milner, of Cheadle, in his presidential address, stated that never in the history of labour was there less need than now of new subsidies for housing. Official expenditure continued to grow, and it had been followed by abuses. The houses at twelve to the acre with park surroundings at an artificially low rent had attracted the wrong people to the municipal estates: that was, people who could afford to live in non-subsidised houses. Even the Government now admitted the evil to some extent. Surely, said the president, the time had arrived when the squandering of public money on housing subsidy should stop in view of the grave state of the national finances, the improved status of labour, and particularly the labourer, and the abuse of the comparatively well-to-do tenants living in the municipal houses.

Mr. Norman McKellen (Manchester), secretary, said there were plenty of investors ready and willing to put their money in the building of houses "to let" if the Government would agree to withdraw subsidies.

On the motion of Mr. A. Ford (Birmingham) the conference passed a resolution making representations to the Ministry of Health that private builders should be able to do what local authorities did with regard to drainage and all other things connected with house building.

At Tuesday's meeting the question of the Ministry of Health granting permission to local authorities to build houses without subsidy in places where private enterprise could provide all the houses required was discussed, and it was decided to send a letter to the Minister on the subject.

Mr. N. McKellen said investors were turning to property for the best return on their money, and they did not want local authorities to embark on competitive lines against private builders. He contended that the waiting lists on which the local authorities based their schemes were overweighted, and said, if properly examined, they would be found to be a mass of exaggeration.

The Royal Sanitary Institute.

A Sessional Meeting of the Royal Sanitary Institute will be held at Coventry on Friday, October 21. At 5.30 p.m., in the Council House, papers will be read to open discussions on "The Position of the Medical Officer of Health in Relation to Industrial Hygiene," by Dr. A. Massey, Medical Officer of Health of Coventry, on "Current Sanitary Engineering Schemes in Coventry," by the City Engineer, Mr. E. H. Ford, M.Inst.C.E., and on the "Place of National Health Insurance Administration in the Public Health Scheme," by Mr. J. C. Lee Gordon, Clerk to the Coventry Insurance Committee. The meeting will be preceded, at 12.30 p.m., by a reception by the Worshipful Mayor of Coventry, and, after lunch, at 2.45 p.m., a visit will be paid to the Standard Motor Works, Canley, at the invitation of the Standard Motor Co., Ltd.

Public Health Congress.

This Congress, the third of the series, opens at the Royal Agricultural Hall, Islington, N, on Monday, November 14, remaining open until the end of that week. The president is Sir Edward Hilton Young, O.B.E., Minister of Health. Many subjects of interest to the building industry are down for discussion. Mr. C. Killick Millard, M.D., B.Sc., will speak on "Housing and Slum Clearance," and Mr. H. A. Des Voeux, M.D., president of the Smoke Abatement Society, will lecture on "Smoke Abatement and Public Health." Mr. J. R. Oxenham, M.Inst.M. & Cy.E., will deal with "The Future Development of Large Towns"; and other subjects which will be discussed are "The Provision of Playing Fields and Open Spaces as Affected by the Town and Country Planning Act, 1932," and "The General Administrative Equipment of a Mental Hospital." All inquiries should be addressed to the Hon. Secretary at 13, Victoria-street, S.W.1.

CURRENT AND PROPOSED BUILDING WORK*

In these lists every care is taken to ensure that information given is accurate and up to date, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations: T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; B.C. for Borough Council; P.C. for Parish Council; M.H. for Ministry of Health; M.T. for Ministry of Transport; C.B. for County Borough; B. of E. for Board of Education; M.W.B. for Metropolitan Water Board; Borough Surveyor, B.S.; Borough Engineer, B.E.; District Surveyor, D.S.; Clerk, C.; Town Clerk, T.C.; County Engineer, C.E.; County Surveyor, C.S.; Surveyor, S.; Engineer, E.

Aberystwyth.—T.C. proposes 8 houses at Caeffynnon.

Aberystwyth.—T.C. proposing new pavilion on site of Waterloo Hotel, at £17,000.

Arbroath.—Approval given to Corporation scheme of 60 houses. T. A. Hogg, Burgh Architect.

Audenshaw.—U.D.C. approved plans for 10 houses, Groby-rd., and 4 shops, corner of Audenshaw-rd., for A. V. M. Deane; 12 houses, Kershaw-lane and Rivington-grove, for Audenshaw Building Co.

Ayr.—Church to be erected at Elba-st. and James-st. J. Carrick, architect, Wellington-sq.—Corporation to erect police station. J. Young, Burgh Architect.

Ayr.—Corporation sanctioned 208 houses at Lochside. J. Young, Burgh Architect.

Bircoates.—Church Council to proceed with extending chancel of church at £300.

Birkenhead. — Catholic Authorities (Brother Noonan Superior) proposing school, Manor Hill. Plans by W. Ellis, L.R.I.B.A., Union Bank-chams., Hardshaw-st., St. Helens.

Birmingham.—Corporation intend to sanction certain special buildings adjoining 192, Clements-rd., Yardley.—Further portion of extension scheme at Princess Alice's Orphanage, Chester-rd., New Oscott, now to be undertaken by erection of Brampton Memorial Hall. Plans by Crouch, Butler & Savage, FF.R.I.B.A., New-st.

Birmingham.—Shops on site in Hagley-rd. West, Quinton, for F. B. Clarke & Co., 14, Temple-st.

Blackpool.—Trustees of Wesleyan Mission Church, Waterloo-rd., propose additions to buildings.—H. Best, F.R.I.B.A., 20, Clifton-st., architect, for arcade, shops and flat on Promenade and Withnell-rd., for Mrs. H. Hall.—R. B. Mather, Son & Wilding, Birley-st., architects for elementary school on Glastonbury-av. and Preston New-rd., Marton, for Catholic Authorities and Very Rev. Canon Lupton, St. Cuthbert's, Bristol-rd., South Shore.—W. Swann, St. Peter's-chams., Stockport, architect for meeting house on Raikes-parade, South Shore, for Society of Friends.

Blyth.—T.C. acquired land at Bebside for housing purposes. L. Leeper, B.E.

Brampton.—Board of Management of Brampton Cottage Hospital propose maternity ward.

Bromley (Kent).—Amongst the plans approved or recommended for approval by the Highways and Buildings Committee were the following: Sanders Bros. (Stores), Ltd.'s plans of addition, 18, Market-sq.: W. E. & S. Rumph's plan of 9 houses, Lower Gravel-rd.

Bury.—Housing and Health Committees decided to recommend T.C. to complete Huntley Brook and Huntley Ford housing schemes on houses of the 2-bedroom type. To complete schemes nearly 180 houses will be erected.

Canterbury.—Alterations to "White Hart Hotel," Hythe, for Mackeson & Co., Ltd., brewers, of High-st., Hythe.

Chard.—R.D.C. is to obtain tenders for 8 houses at Merriott and 4 each at Shepton, Beauchamp and Hewish.

Chester.—E.C. recommend proposals of Elementary Education Sub-committee regarding erection of new school on Lache housing estate.—Council recommend that plan and elevations, prepared by F. C. Saxon for new building upon site of Newgate House, and tenders be invited.—Plans passed: Kenmure Kenna, A.R.I.B.A., on behalf of Provincial Greyhound Syndicate, Ltd., new track and buildings at Sealand-rd.; garage, petrol station and shop, with living accommodation, Long-lane, Upton, Donald & Ashton; F. Broughton, 4 pairs of houses, Hoole-lane; Brown & Sanders, 12 houses on Wervin-Stoke-rd., Upton.

Chester-le-Street.—R.D.C. to ask ministry to sanction more houses. M. Wilson, architect, Union Offices.

Congleton.—T.C. authorised preparation of scheme for public swimming-baths at £10,000.

Cookridge.—Plans prepared for shops, junction of Tinshill-drive and Tinshill-rd. Tenders invited.

Coventry.—Local Brigade of St. John Ambulance Association propose ambulance hall, drill hall and garage at £1,200.

Coventry.—Public Assistance Committee recommend approval be given to purchase of land at Ansty-rd. and erection of house and office for No. 6 Relief District, at £1,155.—General Works Committee recommend 16 additional houses at Harnall-lane rehousing site, at £4,432.

Crewe.—Cheshire County Branch of the National Farmers' Union acquired Havelock House, Mill-st., for headquarters.

Croydon.—C.B. received M.H. approval to borrowing £6,463 for mental hospital extensions.—Electricity Commissioners sanctioned £8,228 for building, lifts and heating, etc., at meter hire dept.—Chief Electrical Engineer considering sub-station at Norbury Manor school, Stanford-rd., subject to approval.—Plans been submitted for 6 houses and 4 flats at corner of Windmill-rd. and Beulah-grove, and tenders to be invited.—Council received permission to erect additions to generating station at Stubbs Meade allotment land.—Plans passed: Steel & Howes, Farnley-rd., 31 houses and studio, Chartham-rd.; F. H. Willcocks, 51, Beechwood-av., 9 houses and garage, Storrington-rd.; J. Scratchley, 21, Woodville-rd., 20 garages and 2 w.c.'s, rear new houses between 110-106, Bensham Manor-rd.; J. G. Calcot, 36, Winterbourne-rd., 5 houses, Kingslyn estate, Grange-rd.; C. R. Riches, 5, Church-rd., alterations and additions, "The George" p.h., Canterbury-rd.; H. Macintosh, East Croydon, 24 houses, Dacre-rd.; J. Smith & Son, Ltd., Junction Works, South Norwood, S.E., bank premises, London-rd. at West Croydon Bridge; South Suburban Co-operative Society, Ltd., London-rd., workshop extension, Lower Addiscombe-rd., at rear 311; A. T. Perryman, 139, Stafford-rd., Wallington, showroom addition, Purley-way, at Standard Steel Works; Hooker & Rogers, 4, High-st., for H. Streeter, Ltd., 9 houses, Laurier-rd.; P. Richardson, 139, Wickham-rd., 7 shops with rooms over, Wickham-rd.; A. J. Cohen, Estate Office, Raglan-gdns., Wembley, shops with rooms and offices over, High-st. and Coombe-rd., at corner; Truett & Steel, Ltd., High-st., Thornton Heath, 19 houses, Tylecroft-rd.; Brice & Co., 181, Shirley-rd., 5 garages and 1 lock-up shop, new road leading to West-way, 1 house, Spring Park-rd.

Darlington.—Housing Committee given instructions for application to be made to M.H. for sanction for 122 houses in Hundens-lane.

Denton.—Lancashire Felt Co., Ltd., proposing extensions to works in Felt-st. Plans by Thorpe & Collier, 66a, Deansgate, Manchester. Contracts not let.

Dewsbury.—Subject to M.H. approval, E.C. propose to purchase site at Bank Top, Earlsheaton, for senior council elementary school.

Doncaster.—Doncaster Aviation Co. propose club-house at Armthorpe Aerodrome.

Doncaster.—Plans prepared for Colony for Mental Defectives at St. Catherine's Hospital. Tenders invited. V. Turner, architect, Rotherham.

Douglas (I.O.M.).—The Town Council approved plans for 13 houses in Westminster-drive, submitted on behalf of McKibbin & Kewley.

East Ham.—C.B. recommend approval to North Woolwich and Market-st. clearance areas.—M.H. sanctioned borrowing of £11,090, for provision of additional accommodation at "Harts" Sanatorium. —Plans passed:—addition to factory, Greenhill-grove, Leslie Bros.; lock-up shop with a hall over, United Methodist Church, High-st. North, Tennyson-av., C. W. Hodgson; two new roads and 85 houses (21—1/41, Reynolds-av., 16—2/32, Leader-av., 16—1/31, Leader-av., 16—2/32, Leighton-av., and 16—1/31, Leighton-av.), R. J. Slater; building line, Milton House, High-st. South, corner Vicarage-lane, Seaden & Speidle; 3 lock-up garages on vacant land, corner Ruskin-av. and Essex-rd. (adjoining 65, Ruskin-av.), A. E. Jones.

Edmonton.—U.D.C. applying to M.H. for sanction to £48,900 for sewage works extensions.—Amended lay-out plans been prepared for 88 houses in Woolmer-rd.—Plans passed: Swannell & Sly, for A. Robinson, revised lines of drainage for 139 terraced houses on Hyde estate, Church-st.; D. T. Shepherd, 10 houses, King Edward-rd.; London Co-operative Society, Ltd., alterations and additions, 193-6, Hertford-rd.; G. Groves & Sons, 4 garages, rear of shops, corner of Silver-st. and College-gdns.; North Metropolitan Electric Power Supply Co., sub-station at Windmill-rd.; United Dairies, Ltd., alterations to depot at corner of Church-st. and Cambridge-rd.; —, Yatelande, 32 houses, Blakesware-gdns.; Stanley, Parkes & Brown, additions, Rolls Factory, College-gdns.; W. P. Render, 44 houses, Dover-rd., Moat Farm estate; Rego Clothiers, rebuilding of 2 factories, Angel-rd.

Epworth.—R.D.C. propose 66 houses.

Gainsborough.—T.C. propose 50 houses.—Lincolnshire Rural Housing Co. propose 16 houses at Haxey.

Gateshead-on-Tyne.—L. Ather, Windy Nook-rd., Felling-on-Tyne, proposes 12 lock-up garages in back Enfield-rd.—9 houses in back Enfield-rd. by L. Ather, builder, of Windy Nook-rd., Felling-on-Tyne.—County of Durham Electrical Power Co., Ltd., Carliol House, Newcastle, to erect a sub-station, Dryden-rd.

Glasgow.—S. Birkett, A.R.I.B.A., 16, John Dalton-st., Manchester, preparing plans for offices at junction of Renfield-st. and Bath-st. for Refuge Assurance Co., Ltd., Oxford-st., Manchester. Plans in preliminary stage. Contracts not let.

Grantham.—Branch premises in Market-st. and High-st., for Montague Burton, of Hunslet-rd., Roundhay, Leeds. Architect, H. Wilson, 61, North-lane, Roundhay, Leeds.

Hailsham. — R.D.C. passed: Cowstalls, dairy, garage, etc., at Horsebridge Wood, Hellingly, for A. White.

Halifax.—Parks Committee proposes paddling pool at Shilden Park. T. Lloyd Jones, B.E.

Hartley Wintney.—R.D.C. approved:—Staff house, North Warnborough, for Lt.-Col. Sir John Humphery; alterations at "The Cricketers," Crondall, for Courage & Co., Ltd.; alterations to Wimble Hill school, for Hants County Council; children's homes at Odiham and Crondall, for Hants County Council.

Heywood.—31 houses proposed in John-st. and Clark-st.—T.C. propose slipper baths and school clinic and health offices in Taylor-st. B.S.

Huyton (Lancs).—U.D.C. is to borrow £20,100 for 42 houses.

Isle of Axholme.—R.D.C. to proceed with housing scheme, comprising the erection of 66 houses by direct labour.

Keniworth.—U.D.C. received sanction to 12 more houses.

Kidderminster.—T.C. approved: Mrs. R. Hill, 5 pairs of houses, Mariipool-lane; Towers, Wilson & Co., 8 houses, new road, off Somerleyton-av.; Kidderminster Industrial Co-operative Society, Ltd., offices, etc., Oxford-st.

Kincardine.—Bridge to be erected over Firth by Fifeshire C.C. County Architect and Engineer, St. Catherine's-st., Cupar.

Kingsclere and Whitchurch (Hants).—R.D.C. is to erect 36 houses in various parishes. M.H. sanction has been obtained and tenders are to be invited.

Ledbury.—U.D.C. is to erect 30 houses in Oatley's-rd.

Leeds.—C. & M. Sumrie, Ltd., Cross Stamford-st., to erect factory in York-rd.

Levenshulme.—B. Marcolis, builder, Sandy-lane, Romiley, near Stockport, acquired site on Station-rd., Broom-lane and Bristol-av., Levenshulme, for 20 houses.

Liverpool.—G. de Courcy Fraser, F.R.I.B.A., Wellington-bldgs., The Strand, preparing plans for additions to buildings off Church-st. for Cooper's, Church-st. Contracts not let.

Lochgelly.—Corporation to carry out new housing scheme. Alex. Lumsden, Burgh Architect.

London (Bermondsey).—B.C. received notice from M.H. of approval to two cottages, 83 and 87, The Grange; 28 flats on Grange-walk; 40 flats, Rotherhithe-st. clearance; 20 flats, Vauban-st. area.—L.C.C. sanctioned borrowing of £12,000 for block No. 5 on Vauban-st. clearance area, and borrowing of £26,250 for 42 flats and 6 shops in Odessa-st.—Plans passed:—Borough Council, building lines—new medical clinic—Grange-rd. and Alscot-rd., 108, 109 and 110, Grange-rd.; Borough Council, proposed frontage line, Millpond estate, Paradise-st.; Borough Council, block of flats, block No. 1, Grange-walk.—Drainage plans:—W. A. King & Sons (Brixton), Ltd., builders, Melbourne-sq., S.W.9, for Cambridge University Mission, 39, Jamaica-rd., residence and mission hall, 96/97, New Church-st.; E. W. Mallett, 27, Fair-st., for J. Miller & Co., Mersey Garage, Crucifix-lane, alteration to warehouse premises, Mersey Garage, Crucifix-lane.

London (City).—Corporation recommend £300 for cleaning, etc., Hornchurch Wharf.

London (Hackney).—B.C. approved: G. E. Soulsby, building at 12, Groombridge-rd., E.9; A. E. Sewell, building at "The Queen's Hotel," Victoria Park-rd., E.9; A. J. King, Ltd., construction and works of drainage at Bush's factory, Ash-grove, E.8; F. G. Roberts & Co., Ltd., construction and works of drainage at Hackney Hospital, Homerton, E.9; Griggs & Son, Ltd., construction and works of drainage at German Hospital, Dalston-lane, E.8; H. Victor, construction and works of drainage at 55, Dalston lane, factory, J. S. Gould.

London (Lewisham).—B.C. approved: R. B. Rowell, 8 houses, De Frene-rd.; W. J. Scudamore, Ltd., 10 houses, Linchmere-rd.; R. B. Rowell, 10 houses, De Frene-rd.; H. Macintosh, 25 houses, Brockley-grove; —, Pearsons, houses, Dunoon-rd. and Honor Oak-rd., Forest Hill.

London (Poplar).—B.C. served notice in respect of Old Ford-rd. area No. 15, and scheme regarding development of site being prepared by B.S.—Plans passed: H. Bradford & Sons, 37, Shacklewell-lane, E.8, 2 new cottages, Old Ford Lock, Parnell-rd., E.3; Hooper, Cushen & Co., estate office, Millwall, E.14, additions to Langbourne Wharf, West Ferry-rd., E.14; F. Hamlett, 764, Barking-rd., E.13, workshop, rear of 131, Roman-rd., E.3.

Longford.—Board of Health instructed engineer to prepare plans and specifications for 31 labourers' dwellings in Ballymahon area.

Lowestoft.—C.B. authorised B.S. to remove railings from Belle Vue-pk. and to re-erect them at Lowestoft Cemetery, and to provide an open ironwork fence at park.—Plans passed: J. A. Gaze & Sons, 50 houses, Kimberley-rd.; D. Leighton & Son, Ltd., 3 semi-detached houses, Corton-rd.; G. Armes, addition to showroom, London-rd. North.

Macclesfield.—C. J. Russell, Ltd., Earl-st., Edgeley, Stockport, acquired mill premises in Dale-st. for transference of business.

Macduff.—Corporation to erect 16 houses. J. C. Miller, Burgh Architect.

Malton.—U.D.C. appointed G. D. Channon, 4, Market-st., as architect for housing scheme.

Manchester.—A. Hartley & Son, Ltd., builders, 51, Bridge-st., proposing lay-out land on Lathom estate with frontages to Wilmslow-rd., Withington, for shopping centre. Plans by Meller, Speakman & Hall, L.R.I.B.A., 1, Cooper-st.—Lords' Estates, builders, Walshaw-st., Oldham, proposing 15 houses on Matthew-lane, Cranmer-av. and Mount-rd., Levenshulme, and 92 houses on Greengate North-crescent, South-crescent and Middlegate, Moston.—Manchester and Salford Equitable Co-operative Society, Ltd., Downing-st., propose milk depot, Berresford-rd. and Buller-rd., Longsight. Plans by Society's Architect, E. Fielding, Works Dept., Downing-st.—S. Moss, A.R.I.B.A., 4, St. Anne's-sq., preparing scheme for motor-car showrooms and garage and petrol-filling station, corner of Victoria-av., Rochdale-rd., for H. L. Goldberg.—Sparkes & Stephens, Ltd., builders, West Point estate, Manchester-rd., Chorlton-cum-Hardy, propose 32 houses, Dunrobbin-av., Dacre-rd., Stratton-rd. and Manchester-rd., Chorlton-cum-Hardy. Plans by J. Dalby, architect.—Plans approved by T.C.:—mission hall, off Heaton-pk.-rd., Blackley, for Over-

*See also List of Contracts, Competitions, etc.

night Brethren, The Gospel Hall, Oakworth-st.; J. W. Maunders, builder, 21, Grange-av., Stretford, proposes lay-out estate off Hemmons-rd., Sutcliffe, and Catling-av. and Ollier-av., Gorton, for housing estate.

Mansfield.—Council applying to M.H. for further 100 houses.—Scheme for alterations to Town Hall at £865 and conversion of Carr Bank House into public offices at £1,500 received sanction.

Market-Rasen.—U.D.C. to erect 36 non-parlour type houses in Mill-lane at £12,430.

Monsten-in-Wharfedale.—Electrical Distribution of Yorkshire, Ltd., 36, Park-place, Leeds propose sub-station, Burley-lane.

Middlesbrough.—T.C. has under consideration proposal for additional 160 houses. S. E. Burgess, B.E.

Monaghan.—U.D.C. considered proposed new housing scheme and resolved to build 40 houses.

Morayshire.—C.C. decided on new housing scheme for New Elgin.

Motherwell.—Corporation to erect houses Thornlee-st. and York-st. V. Wilson, architect, Merry-st., Motherwell.

Newburn-on-Tyne.—U.D.C. asking M.H. to sanction 300 houses at Westerhope and Bell's Close. J. A. Weatherley, S.

Newcastle-on-Tyne.—W. E. Hall & Sons, 29, Durham-rd., Low Fell, Gateshead, propose houses on Thorntree site.—Rington, Algernon-rd., to add an additional story to premises. Architect, S. J. Stephenson, 2, Saville-place.—City Council agreed to purchase additional land in Welbeck-rd. for housing purposes. R. E. Roberts, Housing Architect, 18, Cloth-market.—Plans approved for premises in Northumberland-st. for Bradburn. J. Oswald & Son, 2, Worswick-st., architects.

Newtownmore.—Hotel to be erected. J. T. Beveridge, F.R.I.B.A., 248, West George-st., Glasgow.

Normanton.—F. W. Copp, architect, instructed to prepare plans for construction of cemetery with chapel, boardroom and curator's residence.

Northallerton.—North Riding C.C. to enlarge casual wards of Poor Law Institution at £900.

North Shields.—Woodall & Shepherd propose houses and shops in Verne-rd.—W. Bower, Stephenson-st., to erect 12 semi-detached houses, Hawkey's-lane, 6 houses in Cleveland-rd. and 20 houses in Milton-ter. Plans by W. Stockdale, 73, Howard-st.

Odiham (Hants).—Hartley Wintney R.D.C. proposes 12 houses at Hartley Wintney and 20 at Odiham.

Oldham.—T.C. propose modern bandstand and pavilion at Alexandra-pk. Plans by S. Estimated cost £5,000.

Orrell (Wigan).—The R.D.C. has received permission from M.H. to borrow £2,350 for the conversion of 760 privies.

Oswestry.—Board of Management of Cripples Training College, Derwen, propose 12 houses.

Penrith.—U.D.C. is to erect 24 houses at Castlehill and to seek M.H. sanction.

Pocklington.—Application to be made to M.H. by U.D.C. for sanction to raise loan to purchase land for housing purposes.

Pontefract.—Miners' Welfare Committee propose to erect pit-head baths at Prince of Wales Colliery, near Pontefract. Plans by J. H. Forshaw, A.R.I.B.A., Mines Section, Dean Stanley-st., London, S.W.1.

Prestwich.—U.D.C. propose clinic in St. Mary's-rd., adjoining library.

Quarry Bank.—U.D.C. instructed architect to prepare plans for 8 maisonettes on Saltwells Wood estate.

Ravensthorpe.—H. Brearley, architect, Westfield, Syke-lane, Earlsheaton, preparing plans for 130 houses. Tenders invited.

Rawtenstall.—T.C. approved: 16 houses, new road, Waterfoot, J. Edmondson; Electricity sub-station at Barley Holme-rd., Crawshawbooth, Electricity Department.

Reigate.—R.D.C. is to invite tenders for pair of houses at Walton-on-the-Hill.

Rochdale.—Wardleworth Conservative Club, Jermyn-st., propose extensions to buildings.

Ryton-on-Tyne.—S. to U.D.C. reported on suitable sites in town for two-roomed houses.

St. Asaph (Flints).—R.D.C. has obtained M.H. sanction to 48 houses. Tenders for 26 have been accepted.

St. Paul's Cray.—Chislehurst Wesleyan Circuit decided to enlarge St. Paul's Cray Chapel by addition of schoolroom. Superintendent minister is the Rev. J. C. Adlard, The Manse, Chislehurst.

Shardlow.—R.D.C. accepted tenders for 56 non-parlour type houses at Sandiacre, at £17,415.—Application to be made to M.H. to borrow £18,270 for scheme.

Shipley.—West Riding Standing Joint Committee had plans submitted for new police station at £6,000.

Solihull.—U.D.C. approved:—27 lock-up garages, Gospel-lane, E. J. White; 32 houses, Castle-lane, C. McWhirter; 5 houses, Blackford-lane, W. Sanders; 30 houses, Sharman's Cross-rd., Biddle & Homer, Ltd.; 8 houses, Prospect-lane, W. H. Heeley.

Southend.—T.C. approved: 7 houses, Westborne-grove, Geo. Wells; 5 bungalows, Blenheim-chase, H. Joscelyne; alterations and additions, "The Rivoli," Alexandra-st., Sidney Bacons Pictures, Ltd.; 7 bungalows and two houses, Highfield Way, Highfield Garden estate, E. E. Everitt; 6 flats, Eastcote-grove, W. J. Standen; shop premises, 21-23, Broadway, Leigh, F. W. Woolworth & Co., Ltd.; 6 flats, Westbury-rd. (corner of Central-av.), A. S. Chalkley.

South Shields.—F. W. Newby, 37, King-st., architect for store and garage in Thames-st. for Trustees of the late Thomas Alderson.—Howard Hill, L.R.I.B.A., 10, Winchester-st., architect for alterations to "Old Rector Inn," Green-st., for R. Scott.

South Shields.—T.C. approved: warehouse at 8-10, Ormonde-st., A. Bruce & Son; alterations to front of Imperial Cinema, Denmark-st., Frank Forster; lay-out of 8 semi-detached houses and 1 detached house at Salisbury-pl., F. Wills; warehouses, Thames-st., W. H. Bowman; warehouse, 25, Long-row, W. H. Bowman.

Southwell.—Building Committee proposing Memorial Hall and cinema on Honey-knab-lane, Oxton. Plans by A. Brocklehurst & Co., F.R.I.B.A., Martin's Bank-bldgs., 10, Norfolk-st., Manchester. Contracts not let.

Stechford.—Rev. F. F. Gateley, Corpus Christi, propose schools to accommodate 400 children.

Stockport.—P. Peirce & Son, L.R.I.B.A., 39, St. Petersgate, architects for crematorium in cemetery for Stockport Borough Cemetery Co., Ltd.

Stonehaven.—Public Health Committee of Kincardineshire C.C. sanctioned two blocks of four houses at Gourdon and Johnshaven.

Stourport.—U.D.C. received letter from M.H. stating that they had no objection to tenders being invited for further 40 houses.—Plans passed: alterations and additions to Severn Valley Works of T. B. Worth & Sons, Ltd.

Stratford-on-Avon.—A. E. Ladd, 30, Bridge-st., proposes to erect up-to-date premises in Sheep-st. Architect, L. L. Dussault, F.R.I.B.A., 39, New Hall-st., Birmingham.

Swansea.—Additions to Gorseinon General Hospital, near Swansea, about to be made by erection of maternity block, additional nurses' accommodation and visitors' shelter. Work been entrusted to Glendinning Moxham, F.R.I.B.A., architect, Swansea.

Thornley.—It is proposed to enlarge Roman Catholic Church. Architect, R. Burke, 12, Grey-st., Newcastle.

Thornton-Cleveleys.—U.D.C. to consider scheme for constructing promenade along portion of river Wyre.

Tiverton.—T.C. seeks loan of £2,000 for purpose of erecting offices for sanitary inspector and education clerk, at St. Andrew's-st.

Tynemouth.—Sanction of B. of E. received by E.C. for school on Chirton Farm estate. J. L. Beckett, B.E.—E.C. obtained sanction to proceed with school at Chirton. J. Beckett, B.E.

Upholland (Wigan).—M.H. has sanctioned R.D.C. scheme for 24 houses at the Newgate site.—R.D.C. also propose 10 at Hallgreen, 8 at Crawford Village, 8 at Daniels-lane and 12 at Roby Mill. M.H. sanction is being sought.

Walsall.—Herbert Sutcliffe, builder, of Walsall, is to develop the T.C.'s site at Delves by the erection of 200 houses now and 200 later.

Warrington.—Plans submitted to B. of E. for elementary school at Bewsey to accommodate 150 infants for the Rev. J. Aldred Clarke, O.S.B. Architects, Wright & Hamlyn, Winmarleigh-st.

Westslade.—U.D.C. proposed 36 houses at Dudley.

Wellingborough.—U.D.C. approved: 16 houses, Eastfield-rd., E. H. Giles.

West Lancashire.—R.D.C. passed plans for a new school at the Epileptics' Homes, Maghull, Ormskirk.—Council has accepted tenders for 10 houses at Netherton, at £3,290, and 8 at Lydiate, at £2,376.

Westminster.—Housing Committee will submit schemes to City Council for erection of 600 houses, at £200,000.

Wexford.—Corporation completed arrangements for obtaining of loans from Board of Works amounting to £13,100 for 42 houses.

Whiston (Lancs).—R.D.C. is to erect fire station in Delph-lane.—R.D.C. approved plans for 6 houses, Brookside-av., Eccleston, for H. Scott, and 4 at Portico-lane, Whiston, for S. H. Reakes.

Whitley Bay.—U.D.C. agreed to support Oliver & Roberts, engineers, 6, Broad-st.-place, London, E.C.2, in their application for sanction to build pier at Whitley Bay.

Whitstable.—U.D.C. passed plan for house for Her Majesty the Queen. House to be erected as addition to Barn House, Queen Mary's Holiday Home for Girls.

Wigan.—R.D.C. to acquire site for mortuary.

Wimbledon.—T.C. to erect fencing at Wimbledon-pk. estate.—New mortuary being proposed.—Tenders to be invited for extensions to fire brigade headquarters.—Council considering provision of public conveniences in the neighbourhood of The Grove, Merton, and in the vicinity of Raynes-pk. station.

Windsor.—T.C. approved:—alterations at "The Elephant and Castle," Oxford-rd., for Courage & Co., Ltd.; Montague Burton, Ltd., Roundhay, Leeds, propose premises at High-st. and Peascod-st.; 6 dwelling houses in Dedworth-rd., for —. Cross.

Wolverhampton.—T.C. approved: G. H. Guest, 3 pairs semi-detached villas, Burnham-av., Oxley; Pidgeon Bros., Ltd., 3 pairs of houses, Manor-rd., Oxley; Phillips & Jones, showrooms, lavatory accommodation and alterations, 80, Darlington-st.; Managers, St. Mark's School, alterations, St. Mark's Schools, Humber-rd.; Marshall & Sons, 10 houses, Green-lane, off Pendeford-lane; Benniston & Jones, 10 houses, Aldersley-rd.; South Staffordshire Permanent Building Society, new premises, Princess-st. and King-st.

Worcester.—T.C. is to erect 202 houses at Brickfield-rd. (No. 2) site, at £70,000. M.H. have approved.

Yarmouth.—T.C. approved: 3 pairs semi-detached houses, Hawkins-av., H. R. Middleton & Co., Ltd.; terrace of 11 houses, Century-rd., Cobholm, G. Holmes.

Yeovil.—T.C. passed plans for new hall to be erected for Labour Institute Society at £3,000.

Yiewsley.—Plans and a new lay-out for 38 houses in Falling-lane submitted by the Surveyor have been approved by the Yiewsley and West Drayton U.D.C

TRADE NEWS

An Announcement.

We learn that Mr. C. Mouritz has joined the firm of Messrs. Horace W. Cullum and Co., Ltd., 50/2, Britannia-street, W.C.1, as a special representative.

An Appointment.

Messrs. T. C. Jones and Co., Ltd., have been appointed by the Arun Engineering Co., Ltd., Horsham, Sussex, as sole selling agents for home and abroad for Arun woodworking machinery. A representative display and stock of these machines will be held at their premises at 93-95, Wood-lane, Shepherd's Bush.

Natural Asphalt Rock Mastic.

Highways Construction, Ltd., with which is amalgamated the French Asphalte Co., Ltd., have issued a booklet dealing with natural asphalt rock mastic and its applications in building construction. These include roofing work, dampcourses, basements, reservoirs, etc. The publication is issued from Iddesleigh House, Caxton-street, S.W.1.

Air Blowing Fans.

Messrs. James Keith and Blackman Co., Ltd., issue from 27, Farringdon-avenue, E.C.4, an entirely new publication—List V69, "Air Blowing Fans"—in which are described the characteristics which Keith-Blackman's blowing fans possess. Architects and engineers interested should also obtain copies of the revised issues of K25, "Paddle Wheel Fans"; G105, "Industrial Heating"; and G133, "Thermostat Gas Controller."

A New Light Car Catalogue.

A catalogue dealing with the 8 h.p. Ford has just been issued by Ford Motor Company, Ltd. It is called "A New Conception of the Light Car," and deals clearly with the general lay-out of the small Ford. Of pocket size, nicely printed and well illustrated in colour, it should be of interest to all who wish to know more of this popular addition to the Ford range. A copy is obtainable from 88, Regent-street, W.

Commercial Six-Wheelers.

The six-wheeler is rapidly becoming the recognised type for general army transport. It is capable of negotiating rough or soft ground, due to its doubled tractive power and halved axle weights, in addition to giving good and safe speeds on made roads. The War Office are steadily replacing their old transport with new six-wheelers. They have just placed a repeat order for 33 Morris-Commercial six-wheeled chassis, three-quarters of which will be fitted with lorry bodies and the remainder will be used for ambulance work. It is interesting to know that Morris Commercial Cars, Ltd., have already supplied the War Office with well over 1,000 vehicles.

Dry Rot and Insect Pests.

For centuries all materials having a cellulose origin have been subject to one of the most persistent and malignant growths. We refer to fungus growth and dry rot. In addition, such materials have often harboured pests. Insects, from the terrible white ant of the tropics to the house bug, have lived on and made their homes in these materials. After ten years of research comes the news that a new chemical treatment, the "Ferox" process, which is non-volatile, odourless and permanent, has just completed two years' test in the tropics, from which it has emerged very successfully. When it is realised that every bit of woodwork in a house may be subjected to the attacks of dry rot, and that once this has set in nothing but a surgical operation of sorts will stop it, this discovery will assume the proportions to which it is justly entitled. The use of this process is exclusive to one of the manufacturers of insulation wall-board, and over a period of two years' test in use has proved highly interesting.

PRICES CURRENT OF MATERIALS.*

Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge. £ s. d.
Best Stocks 4 3 6
Second Hard Stocks 3 18 6

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
"Phorpres"	2 11 3	Flettons, B'fln'se	3 5 3
Flettons at King's Cross ...	2 11 3	Best Blue Pressed Staffs	0 5 0
Do., grooved for Plaster	2 13 3	Do. Bullnose	0 15 0
White Midhurst Facing Bricks (delivered London site)		Blue Wire Cuts	7 5 0
"Phorpres" Whites (do.)			5 0 0
Best Stourbridge Fire Brick :—			3 17 3
2½ in.	8 11 0	3 in.	10 3 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	21 0 0	D'ble Str'tch'rs	29 10 0
		D'ble Headers	26 10 0
Headers	20 10 0	One Side and two Ends	30 10 0
Quoins, Bullnose and 4½ in. Flats	27 10 0	Two Sides and one End ...	31 10 0
		Splays, and Squints ...	28 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.
Delivered London.

	s. d.		s. d.
2 in. per yd. super	1 11	3 in. per yd. super	2 9
2½ in. " "	2 4	4 in. " "	3 6

	s. d.	
Thames Ballast	8 0	per yd.
Pit Sand	11 0	" "
Thames Sand	11 0	" "
Best Washed Sand	11 6	" "
½ in. Shingle for Ferro-Concrete	8 6	" "
¾ in.	11 0	" "
¾ in. Broken Brick	10 6	" "
Pan Breeze	8 0	" "

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

Best Portland Cement. British Standard Specification. Test		
In Jute Sacks (11 to ton)	£2 4 9 to	£2 6 9
In Free Paper Bags (20 to ton) ...	2 6 0 to	2 8 0
Alongside Vauxhall in 80 Ton Lots		
Jute Sacks (11 to ton)		1 17 9
Free Paper Bags (20 to ton)		1 19 0
Ferrocrete per ton extra on above		0 7 6
Vitocrete per ton extra on above		0 7 6
Lightning Brand Aluminous Cement in Jute Sacks (20 to ton)	5 2 9 to	5 8 3

NOTE.—Jute Sacks are charged 1s. 6d. each and credited 1s. 6d. each nett if returned in good condition within three months carriage paid.

Super Cement (Waterproof) Paper Bags free	3 16 0
Ciment Fondu (F.O.R. Works)	4 15 0
Roman Cement	6 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" " Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	4 12 0
Sirapite, Coarse	3 9 0
" Finish	3 17 0
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	1 17 6
Hair ..... per cwt.	2 2 6
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months carr. pd.

Stourbridge Fireclay in s'cks 37s. 0d. per ton at rly. dp.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2 10
BEER STONE.—RANDOM BLOCK— Free on rail at Seaton Station per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. per ft. cube	3 1½
Selected approximate size one way, 1d. per cubic foot extra; selected approximately three sizes or for special work, 3d. per cubic foot extra.	
PORTLAND STONE— Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park Paddington, G.W.R., per ft. cube	4 4½
Do. do. delivered on road waggons at above stations, per ft. cube	4 5½
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.	
CHILMARK—RANDOM BLOCK— At Nine Elms, per ft. cube	3 11
HOPTON-WOOD STONE— F.O.R. Quarries, Wirksworth, Derbyshire,	s. d.
Random blocks from 10 ft. and over P. ft. cb.	14 0
Sawn two sides ..... "	22 6
Sawn three or four sides ..... "	27 6
YORK STONE, BLUE—*Robin Hood Quality.* Delivered at any Goods Station, London.	
1 in. sawn two sides landings to sizes (under 20 ft. super) ..... Per ft. super	5 6
1 in. rubbed two sides, ditto ..... "	6 0
¾ in. sawn two sides slabs (random sizes) "	2 3½
1 in. to 2½ in. sawn one side slabs (random sizes) "	1 6½
1¼ in. to 2 in. ditto., ditto ..... "	1 3½
HARD YORK— Delivered at any Goods Station, London.	s. d.
Scappled random blocks ..... Per ft. cube	6 8
6 in. sawn two sides landing to sizes (under 40 ft. super) ..... Per ft. super	5 1½
6 in. rubbed two sides, ditto ..... "	6 1½
4 in. sawn two sides slabs (random sizes) "	3 1½
3 in. ditto ditto "	2 8
2 in. self-faced random flags ..... Per yd. super	8 0

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 8s. 6d.; Moulded, 9s. 6d.; Cills, 10s. 0d.

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£24 10	3 × 6	£17 0
4 × 9	20 0	3 × 11	19 10
4 × 8	20 0	2 × 11	19 10
4 × 7	18 0	3 × 9	19 10
3 × 8	18 0	2½ × 9	19 10
3 × 7	18 0	3 × 4½	17 10
2½ × 7	18 0	3 × 4	17 10

PLANED BOARDS.

1 × 11	£22 10	1 × 9	£21 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
⅜	16/-	1¼	25/-
½	17/-	1½	27/6
1	20/-		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.
1	21/-
1¼	26/-
1½	27/6

MATCHING (BEST).

Inches.	per sq.
⅜	15/-
½	16/6
1	20/-

	s. d.
Ins. BATTENS.	
⅜ × 2 ..... per 100 ft.	2 0
SAWN LATHS.	
Per bundle	2 3

1 INCH AND UP THICK.
Average price for prime quality.

	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 15 0
Dry American and/or Japanese Figured Oak, per ft. cube	0 12 0
Dry American and/or Japanese plain Oak, per ft. cube	0 10 0
Dry sq. edged Honduras Mahogany, per ft. cube	0 14 0
Dry log-cut Honduras Mahogany, per ft. cube	0 16 0
Dry Cuba Mahogany, per ft. cube	1 1 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 0
Best Scotch Glue, per cwt. ... £4 10 0 to	—
Liquid Glue, per cwt. ..... 4 7 0 to	5 10 0

SLATES.

First quality slates from Bangor or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	30 0 0	18 by 10	16 10 0
22 by 12	26 10 0	18 by 9	14 12 6
22 by 11	24 10 0	16 by 10	14 5 0
20 by 12	24 0 0	16 by 8	11 0 0
20 by 10	20 2 6		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. Per 1,000. f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district	£4 10 0
ditto hand-made ditto	5 3 6
Ornamental ditto	5 8 6
Hip and valley tiles { Hand-made	0 9 6
(per dozen) { Machine-made	0 9 0

METALS.

	£ s. d.
JOISTS, GIRDERS, &c., TO LONDON STATION, PER TON— R.S. Joists, cut and fitted	£11 0 0
Plain Compound Girders	12 0 0
" Stanchions	15 0 0
In Roof Work	18 0 0

MILD STEEL ROUNDS.—To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	12 0 0	⅝ in. to ¾ in.	10 15 0
½ in.	11 0 0	¾ in. to 2½ in.	10 10 0

WROUGHT-IRON TUBES AND FITTINGS— (Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes and Tubulars Sizes ¼in.to 6in. %	Genuine Wrot. (Puddled) Iron Tubes and Tubulars Sizes ¼in.to 6in. %	Standard Fittings Sizes ¼in.to 6in. %	Standard Flanges Sizes ¼in.to 6in. %
Gas	65	52½	57½	70
Water ...	61½	48½	52½	65
Steam ...	57½	45	47½	60
Galv. gas	52½	40	47½	60
Galv. water	47½	35	42½	55
Galv. steam	42½	30	37½	50

C.I. HALF-ROUND GUTTERS—London Prices ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	11d.	1/5	5d.
3½ in.	11½d.	1/7	5d.
4 in.	1/-½	1/9	5d.
4½ in.	1/1½	2/-	6d.
5 in.	1/5	2/2	8d.
O.G. GUTTERS.			
3 in.	1/1	1/11	5d.
3½ in.	1/2	1/11	5d.
4 in.	1/2½	2/-	5d.
4½ in.	1/4	2/4	6d.
5 in.	1/6½	2/8	8d.

RAIN WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock Branches. angles,	stock angles.
2 in.	1/3½	1/9	2/7
2½ in.	1/4½	2/-	3/1
3 in.	1/8	2/6	3/9
3½ in.	2/1½	3/-	4/4
4 in.	2/5	3/7	5/3

Connections—50 per cent. off above prices.
Tonnage allowance—4 ton lots, 5 per cent.
2 ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices ex Works.

	Pipe, angles, stock angles.	Bends, stock Branches.	
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts.	1 11	1 6½	1 10½
2½ in. "	2 3½	1 8½	2 4
3 in. "	2 4½	1 10½	2 9½
3½ in. "	2 7	2 4	3 3
4 in. "	2 11	2 7½	3 9

L.C.C. COATED DRAIN PIPES—London Prices ex Works.

	Pipe, angles, stock angles.	Bends, stock Branches.	
	s. d.	s. d.	s. d.
2 in. per yd. in 9 ft. lengths ...	3 4	4 3	6 8
cwt. qr. lbs.			
4 in. " 1 1 20 ...	4 7	5 2	8 10
5 in. " 1 2 22 ...	6 0	9 0	14 3
6 in. " 2 0 6 ...	6 8	10 11	18 1

Gaskin for jointing 41/- per cwt.

	Per ton in London. £ s. d.		£ s. d.
IRON— Common bars	10 10 0	to	11 0 0
Staffordshire Crown Bars— Good merchant quality ...	10 15 0	to	11 10 0
Staffordshire Marked Bars	14 0 0	...	15 0 0
Mild Steel Bars	9 10 0	...	10 0 0
Steel Bars, Ferro-Concrete quality, basis price	8 0 0	...	9 0 0
Hoop iron, basis price	11 0 0	...	12 0 0
" Galvanised	27 0 0	...	29 0 0
Soft Steel Sheets, Black—			
Ordinary sizes, to 20 g.	11 0 0	...	11 10 0
" " " 24 g.	12 0 0	...	13 0 0
" " " 26 g.	14 0 0	...	15 0 0
Sheets Flat Best Soft Steel, C.R. and C.A. quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g. ...	13 10 0	...	14 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	14 10 0	...	15 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g. ...	17 10 0	...	18 10 0
No. 1 quality £4 per ton extra.			
Flat and Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 9 ft. to 20 g.	13 0 0	...	14 0 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	14 10 0	...	15 10 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	16 10 0	...	17 10 0
Sheets Galvanised Flat, Best quality— Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	18 0 0	...	19 0 0
Best Soft Steel Sheets, 22 g. and 24 g.	20 0 0	...	22 0 0
Best Soft Steel Sheets, 26 g.	21 10 0	...	23 0 0
Cut Nails, 3 in. to 6 in. ...	15 0 0	...	16 0 0
(Under 3 in. usual trade extras.)			

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

	s. d.
Seamless Copper tubes (basis ..... per lb.	0 9½
Strong sheet ..... "	0 10
Thin ..... "	0 11
Copper nails ..... "	1 0
Copper wire ..... "	0 11

PLUMBERS' BRASS WORK.
Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

RIVER PATTERN SCREW DOWN MAIN HERCULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	11/-	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES S.E./

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

	1½ in.	1¾ in.	2 in.	3 in.
5 lbs. P. traps ...	35/-	41/-	56/-	101/- per doz.
8 lbs. S. traps ..	35/-	45/-	66/-	126/- "

TIN.—English Ingots, 1/7 per lb. SOLDER.—Plumber's 9d., Tinmen's 10d., Blowpipe 11d. per lb.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS—(contd.)

LEAD, &c.

(Delivered in London.)	£	s.	d.
Lead—Sheet, English, 4 lb. and up	22	0	0
Pipe in coils	22	10	0
Soil pipe	25	10	0
Compo pipe	26	0	0

Note.—Country delivery, 20s. per ton extra; lots under 3 cwt. 3s. per cwt. extra, and over 3 cwt. and under 5 cwt., 1s. 6d. per cwt. extra. Cut to sizes 6s. cwt. extra.

Old lead, ex London area, at Mills ..... per ton } £12 0 0

PAINTS, &c.

		£	s.	d.
Raw Linseed Oil, in pipes	per gallon	0	1	9
" " " in barrels ...	" ...	0	1	11
" " " in drums ...	" ...	0	2	2
Boiled " " in barrels ...	" ...	0	2	3
" " " in drums ...	" ...	0	2	5
Turpentine in barrels	" ...	0	5	6
" in drums (10 galls.)	" ...	0	5	8
Genuine Ground English White Lead, per ton		47	0	0

(In not less than 5-cwt. casks.)
Extra for 1-cwt. kegs over 5-cwt. casks is 5/9 cwt.

Genuine White Lead Paint.

	£	s.	d.
"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots per ton delivered	65	0	0
Red Lead, Dry (packages extra) ... per ton	34	0	0
Best Linseed Oil Putty ..... per cwt.	0	13	6
Size. XD quality ..... firkin.	0	3	0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

	Per ft.		Per ft.
15 oz. fourths ...	2½d.	32 oz. fourths	7½d.
15 " thirds ...	3½d.	32 " thirds	9½d.
21 " fourths ...	3½d.	Obscured Sheet, 15 oz. ...	3½d.
21 " thirds ...	4½d.	" 21 oz. ...	4½d.
26 " fourths ...	4½d.	Fluted, 15 oz. 7d., 21 oz ...	9½d.
26 " thirds ...	7½d.	Em'lld, 15 oz. 4½d., 21 oz	6d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED plate in CRATES OF STOCK SIZES.

	Per ft.
Rolled plate ¼ in.	4½d.
Rough rolled ⅜ in.	5½d.
Rough rolled ½ in.	6½d.
Figured, Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish White	5½d.
Ditto, tinted	8d.
Rolled Sheet	4½d.
White Rolled Cathedral	4½d.
Tinted do.	6½d.

Cast plate is same price as rough rolled.

"VITA" GLASS.	Per foot. s.	d.
Clear sheet—not exceeding 1 foot	1	0
Do. do. 2 feet	1	3
Do. over 2 feet	1	9
Polished plate—not exceeding 1 foot	1	6
Do. not exceeding 2 feet	3	0
Cathedral—not exceeding 1 foot	1	0
Do. larger sizes	1	6
Horticultural Sheet and Cathedral "Vita" Glass. Sizes up to 24 inches by 18 inches or not exceeding 3 feet	1	0
3/16 in. Wired Georgian Design. Sizes up to 108 inches long by up to 24 inches wide	2	6

VARNISHES, &c.

		Per gallon £	s.	d.
Oak Varnish	Outside	0	14	0
Fine ditto	ditto	0	16	0
Fine Copal	ditto	0	18	0
Pale Copal	ditto	1	0	0
Pale Opal Carriage	ditto	1	4	0
Best ditto	ditto	1	12	0
Floor Varnish	Inside	0	18	0
Fine Pale Paper	ditto	0	18	0
Fine Copal Cabinet	ditto	1	2	0
Fine Copal Flatting	ditto	1	0	0
Hard Drying Oak	ditto	0	18	6
Fine Hard Drying Oak	ditto	0	19	6
Fine Copal Varnish	ditto	1	0	0
Pale ditto	ditto	1	12	6
Best ditto	ditto	1	2	6
Best Japan Gold Size		0	12	0
Best Black Japan		0	10	0
Oak and Mahogany Stain (water)		0	12	6
Brunswick Black		0	7	0
Berlin Black		0	14	0
Knotting (patent)		1	5	0
French and Brush Polish		0	17	0
Liquid Dryers in Terebene		0	9	0
Cuirass Black Enamel		0	7	0

The Nile Irrigation Scheme.

It is stated that British engineering firms will be asked next month to submit tenders for a £10,000,000 dam across the Nile, part of a £40,000,000 irrigation scheme. It is proposed to divert the main flow of the Nile, to raise by ten feet the level of the vast Lake Albert, and to drain millions of square miles of marsh land. Ibrahim Fahmy Pasha, the Egyptian Minister of Public Works, is in London in connection with the scheme.

HOUSING PROGRESS IN SCOTLAND

The following figures show the progress that has been made in State-aided housing schemes in Scotland to 31st August, 1932 :—

	Completed.	Under construction.
1919 Act	25,129	—
Do. (by public utility societies)	421	—
Private subsidy schemes (1919 Additional Powers Act)	2,324	—
Slum clearance schemes ...	15,063	732
1923 Act :—		
By local authorities ...	4,038	—
By private enterprise ...	23,147	2,897
By public utility societies	80	—
1924 Act :—		
By local authorities ...	58,243	6,435
By private enterprise ...	4,337	145
By public utility societies	127	16
1930 Act :—		
By local authorities ...	2,615	6,250
Unallocated houses ...	—	812
Demonstration houses ...	17	—
Steel houses erected on behalf of Government by Scottish National Housing Company	2,551	—
	138,092	17,287

NEW BUILDINGS IN SCOTLAND

Aberdeen.—Building.—The Plans and Town Planning Committee of the T.C. has passed plans for 7 dwelling-houses at an estimated cost of £5,380. Eighteen other plans of buildings and alterations to buildings at an estimated cost of £2,038 were also approved.

Crieff.—Houses.—For erection of 11 blocks of four houses each the T.C. are inviting estimates.

Edinburgh.—Building.—Plans for the erection of a new golf pavilion at the Braid Hills, the estimated cost of which is between £4,000 and £5,000, has been sanctioned at Edinburgh Dean of Guild Court. Other schemes submitted by the city and passed included plans for the extension and alteration of the piggery section at Gorgie Slaughterhouses, Newmarket-road, Gorgie, at an estimated cost of between £4,000 and £5,000, and plans for alterations at Portobello Baths. Amongst the other building warrants granted by the Court were the following:—P. Carroll, 7 bungalows at Captains-road, Liberton; City, electricity substations, one at Craigentinny-road, one at Willowbrae-road, and one west of the junction of Boswell-loan and Wardie-crescent; pavilion at bowling green, Arboretum-road; G. Mason Kay, 5 bungalows at Featherhall-crescent, South, Corstorphine; J. Fleming Baird Wallace, 6 shops and 9 houses at corner of Corstorphine-road and Saughton-hall-drive; J. Wallace, 10 bungalows at Kekewich-avenue; Lothian Property Co., Ltd., demolitions and erection of 48 houses at Leverockbank-avenue, Trinity.

Kilsyth.—Housing.—Kilsyth Town Council has agreed to the purchase of 6½ acres of ground on Bogside estate for further housing developments.

BUILDING EXHIBITION AWARDS

The following awards have been made in connection with the Schools' exhibits at Olympia, to which reference is made on page 565 :—

Brickwork.—£5 5s. by the Tylers' and Bricklayers' Company, awarded to the Northern Polytechnic; one diploma to the Army Vocational Training Centre, Aldershot, and one diploma to the L.C.C. School of Building, Brixton, for general excellence.

Smithy Work.—£5 by the Company of Armourers and Brasiers, awarded to Sergt. Belasconi, of the Army Vocational Training Centre, Aldershot.

Masonry.—£5 and a silver medal by the Company of Masons, awarded to Mr. G. Simpson, of the L.C.C. School of Building, Brixton; subject, panelled dome.

Plumbing—£20 by the Company of Pewterers; £5 each to Messrs. Hunt, Rowell, and Rolfe, of the Army Vocational Training Centre, Aldershot, and £5 to the L.C.C. School of Building, Brixton.

Joinery.—A special prize of £5 given by Mr. Gilbert Christy and Mr. H. Greville Montgomery, awarded to Mr. Hewitt, of the Northern Polytechnic, for the piece of oak panelling; Mr. A. E. Willis's work, of the Southend School of Arts and Crafts, was highly commended.

Stands.—Four prizes of £5 each, given by the exhibition management, awarded to the following schools for the best set out stands :—Army Vocational Training Centre, Aldershot; Trades Training Schools; L.C.C. School of Building, Brixton; Southend-on-Sea School of Arts and Crafts.

General Exhibits—Highly commended: Chiswick Polytechnic, the Trades Training Schools, and the Willesden Polytechnic.

"Artificial Earthing for Electrical Installations."

This book (written by Mr. T. C. Gilbert, and published by Ernest Benn, Ltd., 154, Fleet-street, E.C.4, price 9s. net) should be of considerable value to electrical engineers and builders. Artificial earthing, as electrical engineers are aware, is a term introduced by the German originators of a system of protection against leakage potentials to differentiate their system from solid earthing. A suggestion to introduce the system into this country is, states the author, receiving considerable support, as the electrical development of rural areas has shown the urgent necessity for some such form of protection. In this book Mr. Gilbert discusses the matter in a practical manner, and demonstrates one way by which these precautions can be successfully applied.

BUILDING TRADE WAGES IN SCOTLAND*

Following are grade rates authorised by the Scottish N.J.C. for Building Industry. The bricklayers in the Glasgow district have ½d. per hour extra. It should be noted that plasterers and painters who are not parties to the Scottish N.J.C. pay higher wages of 1d. and ½d. per hour extra respectively. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classifications ...	A	A¹	A²	A³	B	B¹	B²	B³
Craftsmen	1/6½	1/6	1/5½	1/5	1/4½	1/4	1/3½	1/3
Labourers	1/2	1/1½	1/1½	1/0½	1/0½	1/–	/11½	/11½

Aberdeen	A	Dundee	A	Hawick	A¹	Perth	A
Airdrie	A	Dunfermline	A	Helensburgh	A	Perthshire	A
Alexandria	A	Duncon	A	Inverness	B	Peterhead	A¹
Arbroath	A¹	East Lothian	A	Kilmarnock	A	Renfrewshire	A
Ayrshire	A	Edinburgh	A	Kincardineshire	A¹	Rothesay	A
Bathgate	A	Falkirk	A	Kinross-shire	A	Roxburghshire	A¹
Bo'ness	A	Forfarshire	A¹	Kirkcaldy	A	St. Andrews	A
Broughty Ferry	A	Fort William	A	Lanarkshire	A	Selkirkshire	A
Clackmannanshire	A	Galashiels	A¹	Leith	A	Stirling	A
Coatbridge	A	Glasgow	A	Midlothian	A	Stirlingshire, West	A¹
Dumbartonshire	A	Greenock	A	Motherwell	A	West Lothian	A
Dumfries	A¹	Hamilton	A	Peebleshire	A¹	Wishaw	A
Dumfriesshire	A¹						

* The information given in this table is copyright. The rates of wages in various towns in England and Wales are given on page 572.

CURRENT PRICES FOR BUILDING WORK IN LONDON*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	9	9
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	4
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

Portland cement concrete in foundation 1 to 6	per yard cube	27	0
Add if in underpinning in short lengths	" "	6	0
Add if in floors 6 in. thick	" "	2	6
Add if in beams	" "	3	0
Add if aggregate 1 : 2 : 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	2	0

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	1	5	0

FACINGS.

Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1¼

POINTING.

Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

Extra only to the price of ordinary brickwork :—				
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	0	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	0
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks		4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard super	4	6
Three-quarter-inch vertical damp course	" "	9	6
Three-quarter-inch on flats in two thicknesses	" "	6	0
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	0

MASON.

York stone templates fixed	per foot cube	13	0	
York stone sills fixed	" "	22	0	
Bath stone and all labour fixed	" "	10	6	
Beer stone and all labour fixed	" "	15	0	
Portland stone fixed	" "	20	0	
Chilmark stone fixed complete	" "	17	6	

SLATER.

Welsh 16in. × 8 in. 3 in. lap, including nails	per square	72	9	
Do. 20in. × 10 in. Do. Do.	"	80	9	
Do. 24in. × 12in. Do. Do.	"	90	0	

CARPENTER AND JOINER.

Fir framed in plates	per foot cube	4	3	
Do. joists	" "	4	9	
Do. roofs, floors and partitions	" "	5	3	
Do. trusses	" "	7	9	

		¾"	1"	1½"	2"
Deal rough close boarding	per sq.	33/6	38/-	43/-	70/-
Flat centering for concrete floor, including struts or hangers	"	50	0		
Do. to beams	per ft. sup.	0	9		
Centre for arches	"	1	6		
Gutter boards and bearers	"	1	0		

FLOORING.		¾"	1"	1½"	1½"
Deal-edges shot	per sq.	—	42/6	50/-	57/6
Do. tongued and grooved	"	—	47/-	56/-	64/-
Do. matchings	"	44/-	49/-	—	—
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/-	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	3
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2in. moulded sashes in squares, double hung, double hung with pulleys, lines and weights; average size		3	9

DOORS.		1½"	1½"	2"
Two-panel square framed	per ft. sup.	2/1	2/3	2/5
Four-panel Do.	"	2/4	2/6	2/9
Two-panel moulded both sides	"	2/6	2/9	2/11
Four-panel Do. Do.	"	2/9	2/11	3/2

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/7	1/8	1/11
Deal shelves and bearers	"	1/4	1/6	1/9
Add if cross-tongued	"	2d.	2d.	2d.

STAIRCASES.

	1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets	2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed	1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. x 1¼ in	per ft. run	0	9
Mahogany handrail, average, 3 in. x 3 in.	" "	6	0
Add if ramped	" "	12	0
Add if wreathed	" "	24	0

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/-
Sash fasteners	11½d.	Mortice locks	4/6
Casement fasteners	1/5	Patent spring hinges and letting into floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	15	3
Plain compound girders	"	18	0
Do. stanchions	"	20	9
In roofwork	"	26	6

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/4	1/7	1/9	2/-
Ogee Do. Do.	"	1/6	1/9	2/3	2/9
Rain-water pipes with ears	"	1/6	2/4	—	—
Extra for shoes and bends	each	3/4	4/11	—	—
Do. stopped ends	"	1/6	1/10	2/9	3/3
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	40	0
Do. Do. flats	"	39	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run	0	6
Soldered seam	" "	1	3
Copper nailing	" "	0	3

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste per ft. run		1/1	1/7	1/10	3/-	3/6	—
Do. service	"	1/6	2/-	2/5	3/6	—	—
Do. soil	"	—	—	—	—	—	6/-
Bends in lead pipe	each	—	—	—	—	3/-	6/6
Soldered stop ends	"	1/-	1/4	1/9	2/6	3/2	—
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/6	3/-	3/6	4/4	5/6	7/9
Lead traps and cleaning screws	"	—	—	—	12/7	17/6	—
Bib cocks and joints	"	6/4	9/7	15/4	41/-	—	—
Stop cocks and joints	"	15/4	17/2	25/8	64/-	—	—

PLASTERER.

			s.	d.
Render, float and set in lime and hair		per yard sup.	2	3
Do. Do.	Sirapite	" "	2	6
Do. Do.	Keen's	" "	3	6
Add saw lathing		" "	1	7
Add metal lathing		" "	2	6
(Not including hangers or runners, etc., for suspended ceilings.)				
Portland cement screed		" "	2	2
Do. plain face		" "	3	3
Mouldings in plaster		per 1 girth	0	1
One-and-a-half granolithic pavings		per yard sup.	5	3½

GLAZIER.

21-oz. sheet plain	per foot sup.	0	7
26-oz. Do.	" "	0	10
Obscured sheet	" "	1	1
¼-in. rolled plate	" "	0	9
¼-in. rough rolled or cast plate	" "	0	10
¼-in. wired cast plate	" "	1	3

PAINTER.

Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting, 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	" "	1	2
Preparing for and hanging paper	per piece, 2/- to 4/-		

*These prices apply to *new buildings only*. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Act, and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

A GAS CONFERENCE

The presidential address to the twenty-first annual conference of the British Commercial Gas Association, held at Leeds from September 26 to 28, was delivered by Councillor Geoffrey H. Kitson (chairman of the City of Leeds Gas Department). It was in the domestic field, of course, said the President, that the manifold services of gas to the community were most widely appreciated. In housing schemes all over the country, with very few exceptions, gas had been called in to solve the fuel problem of the home. The general provision had been for a gas cooker, gas fires, and a gas wash-boiler. In many cases provision had also been made for lighting, gas water heaters and gas irons. For the social reformer—and, whatever party labels might be, we were all social reformers to-day—there were other considerations besides those of cost, comfort, and convenience. The gas industry, in alliance with enlightened town-planners and public health enthusiasts, was waging tireless war against the evils of smoke pollution so that the smoke pall might be lifted from our cities, and the town child might have the same chance of health as the child born and bred in the country. What had the future in store? If they planned with foresight, if they seized their chances, there was a great future in store for the industry. Gas production still offered an almost unlimited field to the technician and the inventor. We were only beginning to make the best use of some of the by-products of the industry. The domestic field was not yet saturated. It was true that seven million women in Great Britain cooked by gas; how many of them were using the latest pattern of gas cooker? How many of them used a refrigerator or a gas water heater, or knew indeed of the appliances that now existed? As for gas fires, they would not be satisfied until every chimney in the land had ceased to belch poisonous smoke into the air. There was no reason in these enlightened days for the persistent burning of raw coal on nearly every hearth in every home. In the homes of the people there were other loads for the gas industry. The use of gas for central heating was still in its infancy. The general tendency of architecture to-day was towards large buildings—for blocks of flats, suites of offices and stores. It was for the gas industry to co-operate with the architects, who understood full well the problems of ventilation. There had been much discussion by architects lately on the ventilating value of flues, and it must follow in modern building they should be as universally included as the window or the door.

The gas industry of the future could only succeed in proportion to the pains it took to eradicate its own shortcomings, and not by picking holes in the conduct of others. It had not to be forgotten that the industry as a whole was often judged of necessity by the performance of individual undertakings.

The Conference dinner was held on Tuesday night, and was honoured by the presence of H.R.H. the Prince George.

Specification for Light Rainwater Pipes.

The British Standards Institution has just issued a British Standard Specification for Cast Iron Spigot and Socket Light Rainwater Pipes (Cylindrical) (B.S. Specification No. 460, 1932). This is the sixth British Standard Specification of a series dealing with cast-iron pipes for: water, gas and sewage, No. 78; drainage, No. 437; low pressure heating, No. 40; flue or smoke, No. 41; soil, waste, ventilating and heavy rainwater, No. 416; light rainwater, No. 460. This new Specification represents the first step towards National Standardisation in light rainwater goods; whilst straight pipes only are dealt with at present, it is hoped in future editions to provide for the corresponding fittings and gutters, thereby covering the whole range of cast iron rainwater goods. Copies of this Specification (No. 460, 1932) may be obtained from the Publications Department, British Standards Institution, 28, Victoria-street, S.W.1, price 2s. 2d. each, post free.

TENDERS

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.
¶ Denotes *accepted by H.M. Office of Works and H.M. War Office*.

Aberdeen.—Reconstruction of the Electric Theatre in Union-street. Messrs. A. Marshall Mackenzie & Son, architects:—

Main contract—*S. B. Russell.
Mason, and brickwork—*Edgar Gauld & Co.
Carpenter work—*Calder & Henderson, Old-mill-road, Bon-Accord-street.
Plumber work—*A. B. Robertson & Son, Ltd., Union-street.
Steelwork—*G. Bisset & Son, Sugarhouse-lane.
(All of Aberdeen.)

Ballyclare.—Additions and improvements to Ballyclare public elementary school at Main-street, Ballyclare, for the Antrim Regional E.C. Mr. W. D. R. Taggart, architect, Scottish Provident-buildings, Belfast. Quantities by Messrs. McCarthy & Lilburn, Scottish Provident-buildings, Belfast:—

McRoberts & Armstrong, Belfast	£6,372 14
F. B. McKee & Co., Belfast	5,893 0
Workman, Ltd., Belfast	5,840 0
H. Girvan, Larne	5,740 0
Carson, Ballymena	5,644 0
J. & R. Thompson, Belfast	5,595 0
Harding & Harding, Belfast	5,446 0
C. & W. McQuoid, Belfast	5,350 0
H. Laverty & Sons, Belfast	5,299 0
Hughes & Thompson, Lisburn	5,288 0
John Elliot, Belfast	5,240 0
I. Copeland, Belfast	5,210 0
James Moreland, Belfast	5,045 0
W. H. Beggs, Ballyclare	5,021 12
Wm. Logan & Sons, Belfast	4,984 0
*Donegall Building Works, Belfast	4,837 13

Bexhill.—Erection of the Cooden sub-station building, for the T.C.:—

R. Cook & Sons, Ltd., Crawley	£520 0 0
D. J. Williams, Bexhill	510 0 0
Brown & Middleton, London, W.	470 0 0
Bruce & Co., Bexhill	457 0 0
A. E. Lewis, Bexhill	455 2 0
Fairweather & Ranger, London, W.C.	442 0 0
G. & C. Draper, Bexhill	415 8 0
Ringmer Building Works, Ringmer	393 12 9
J. Bodle, Ltd., Bexhill	391 17 6
Bainbridge & Son, Eastbourne	385 0 0
T. Wallis, Bexhill	384 0 0
Wright & Castle, Isleworth	380 0 0
*J. Alice & Son, Bexhill	367 11 5

Birmingham.—Additions to the chocolate and cocoa factory at Bournville, for Messrs. Cadbury Bros., Ltd. Plans by resident architect:—

*W. Bishop, Birmingham.

Blackpool.—Alterations to premises for showrooms at 28, Topping-street, for Messrs. Naylor & Lees, 2, Topping-street. Mr. J. C. Derham, L.R.I.B.A., architect, Empress-chambers:—

*Cookson & Son, Blackpool.

Blyth.—For 50 houses for aged people on South Farm estate, for the T.C.:—

*Borough Engineer £8,000

Boisover.—19 one-bedroomed bungalows in Moorfield-lane, for the U.D.C. Mr. S. Hoten, surveyor:—

*J. H. & W. E. Ilett, Worksop.

Bournemouth.—For surface water drainage, at Kinson, for the T.C. Borough Engineer:—

*Sumner, Mayor & Haley, Ltd. £26,974 2 9

Brighouse.—Exterior painting of Brighouse Library and Art Gallery, Rydings Park, for the T.C. Borough Engineer:—

*Roebuck & Culpan, Gooder-lane, Brighouse.

Bromley (Kent).—For the erection of two shops at Holmcroft-way, for the T.C. Mr. J. M. Colvin, L.R.I.B.A., architect, Broadway House, Bromley:—

W. Banks, Bromley	£1,989
Pearce Bros., Bromley	1,950
A. Jones, Bromley	1,945
J. Elliman & Son, Ltd., Beckenham	1,919
Andrews & Andrews, Beckenham	1,899
Streek & Co., Ltd., S.E.3	1,890
R. Mansell, Ltd., Croydon	1,826
T. Crossley & Son, Bromley	1,819
W. H. Willson & Co., Bromley	1,798
George Green (Beckenham), Ltd., Beckenham	1,790
E. A. Vickers & Son, Ltd., Bromley	1,769
R. W. Johnson, Croydon	1,768
S. Staples, Bickley	1,754
C. W. Notley, Ltd., Anerley	1,749
Woodhams & Tyler, Bromley	1,696
E. A. Thorn & Son, Sutton	1,675
E. S. Moss, Ltd., Cricklewood	1,675
Rogers & Rogers, Dulwich	1,667
Hawkins & Co., Norwood	1,530
Denton Bros., Orpington	1,496
‡David Kenn & Sons, Ltd., Bexley	1,462

Bromley.—Provision of a reinforced concrete road foundation in part of Bromley Common from the termination of the existing block paving to the termination of that part of Bromley Common, for the T.C.:—

*R. H. Powis, Ltd., Wembley £2,691 11

Cambuslang.—New pavilion. Messrs. H. & D. Barclay, architects, 121, West Regent-street, Glasgow:—

*J. C. Fleming, 25, Waterside-street, Strathaven.

Cannock.—Church on a site at Essington. Messrs. Wood, Kendrick & Edwin F. Reynolds, F.R.I.B.A., architects, 57, Colmore-row, Birmingham:—

*J. & F. Wooton, Ltd., Pinfold, Bloxwich.

Carlisle.—Rebuilding premises, for the Scottish Motor Traction Co., Ltd.:—

‡J. & R. Bell, Ltd., Carlisle.

Castleton.—Choir vestry and lavatories and house for electric blowing equipment, for the Parochial Council of St. Martin's Church (Vicar, Rev. H. Wheewell). Mr. Robert Martin, diocesan surveyor, 90, Deansgate, Manchester:—

*L. Fletcher, Castleton, near Rochdale.

Chapel-en-le-Frith.—Painting outside of Council houses at Chapel-en-le-Frith and Fernilee, for the R.D.C. Mr. J. Hughes, property manager, Reservoir-road, Whaley Bridge:—

*G. W. Lockett, Whaley Bridge £170

Chester.—Alterations to the heating arrangements at the nurses' home annexe, for the T.C. City Surveyor:—

*F. J. Proud & Sons, Delamere-street, Chester £112 2

Chester.—External painting and internal decoration and painting of the houses on the Lache estate, for the T.C. City Surveyor:—

*B. W. Jackson & Son, 18, Platt-street, Moss Side, Manchester £2,879

Cleobury Mortimer.—For 20 additional houses at Highley, for the R.D.C.:—

Ellams & Doughty, Highley £6,375
‡Swindon Public Construction Co. 5,969

¶**Colchester.**—Periodical services for H.M. War Office:—

*S. Lupton & Sons, London, S.W.1.

Cork.—250 houses in the North-west Ward, for the Corporation:—

*E. Barrett, Douglas-road, Cork, (101 houses) £34,994
*Meagher & Hayes (150 houses) 55,431

Croyden.—Sub-station in the Waddon Ponds recreation ground, for the C.B.:—

‡C. H. Gibson, Ltd. £323

Croydon.—Fencing the new coal storage ground, for the C.B.:—

*F. H. Badger £104

Cupar.—For 6 blocks of 4-flatted houses, for the T.C.:—

Mason and brick work—
*Street & Co., Dunfermline £2,523
Carpenter and joiner—
*G. D. Graham, Tayport £1,540
Glazier—
*D. & J. Edmond £43 19
Slater and roughcast—
*J. Robertson & Son, Dunfermline £536
Plumber—
*R. Bett & Son, Cupar £812

Fleetwood.—100 non-parloured houses, on the Flakefleet housing site, for the U.D.C. Mr. Wm. Melville, engineer and surveyor. Quantities by the engineer and surveyor:—

*J. Cryer & Sons, Fleetwood £29,780

Glasgow.—Painter work on Richmond Park baths and washhouses, for the T.C.:—

*T. C. Watson, 254, Kilmarnock-road, Newlands, Glasgow £392 18 2

Glasgow.—Halls at Edrom-street, Shettleston. Mr. James G. Aitchieson, architect, 170, Hope-street:—

*D. Allan, Easdale-street, Shettleston, Glasgow.

Greenock.—Painter work at housing schemes, Mount Pleasant-street, Prospect-hill, Low Ben Farm, Glorn Haddech West, for the T.C. Mr. David Henderson, Housing Architect, Low Vennell, Greenock:—

*W. McKeracher, 157, Eglinton-street, Glasgow £362 6 3

Halesowen.—Painting works on the Council's housing estate, for the U.D.C. Mr. A. Basterfield, clerk :—

*J. Bolton, 76, Long-lane, Blackheath, near Birmingham...£372 9 0

Harrogate.—Workshop and body building department in East Parade, for the West Yorkshire Road Car Co., Ltd.. Myrtle-street. Mr. John Houfe, architect, Albert-chambers, Albert-street :—

Mason and bricklayer—*Kershaw & Hill.
Carpenter and joiner—*W. W. Stott.
Slater—*J. Shepherd.
Plumber, glazier, painter and decorator—*George Thompson (Leeds), Ltd.
Structural engineers—*O. Atkinson & Sons.
(All of Harrogate.)

Hendon.—For construction of 2 bathrooms at Isolation Hospital, Honeypot-lane, for the R.D.C. :—

*Edwardson, Ltd., Pinner £119 10

Hendon.—For 26 non-parlour cottages at Marsh-lane site, for the R.D.C. :—

*Shaw & Sons, London £7,397

Hucknall.—48 non-parlour type houses on Brook-side estate, for the U.D.C. Mr. H. M. Aitchison, surveyor :—

†Sambridge & Co. £14,036

Jarrow-on-Tyne.—30 houses on the Old Church clearance site, for the T.C. Mr. J. S. Weir, Borough Engineer :—

*Direct Labour £8,495

Kenilworth.—Completion of work on the fire station, for the U.D.C. Mr. S. Douglas, surveyor :—

*J. Aston & Sons, Coventry £530

Keynsham.—Public underground convenience in parish of Keynsham, for the R.D.C. Mr. H. W. Argile, building surveyor, 16, High-street, Keynsham, near Bristol :—

*Ayres & Son, 32, Forest-road, Kingswood, Bristol £744

Kirkcudbright.—Blocks of houses, for the Corporation. Mr. W. A. McKinnell, Burgh Architect :—

Excavation, Brick and mason—*Robertson & Davidson, St. Catherine's-gate.
Joinery, carpentry and ironmongery — *W. Drummond, Glen View, Twynholm
Slater—*A. C. White & Co., Ltd., London-road, Carmyle, Glasgow.
Plumber—*G. Munro, 213, West Campbell-street, Glasgow.
Plaster—*J. Hannah & McNish, 1, Loreburn-terrace, Dumfries.

Lanarkshire.—Twenty-four houses at the Rhinsdale housing site, Ballieston area. Mr. P. Smith, architect, County Offices, Hamilton :—

Joinery, carpentry and ironmongery—*James Struthers, 16, Main-street, Bellshill.
Plumber — *R. Lauchlan, 29, Scott-street, Ballieston, Glasgow.
Painter—*J. H. Aspey, Steppe.

Leeds.—Alterations and additions at the "Clarendon" Hotel, Victoria-road, Holbeck, for Messrs. John Smith's Tadcaster Brewery, Ltd. Mr. B. Wilson, architect, High-street, Tadcaster :—

*Pickard & Co.

Leeds.—Alterations and additions at the "Brougham Arms," hotel, for Messrs. Hammonds, Ltd., brewers, Bradford :—

*T. Obank & Sons.

Leeds.—Alterations and additions at the "Nag's Head" inn, Chapeltown :—

*Wm. Irwin & Co., Ltd.

Leeds.—30 houses at Whitehall-road :—

*C. F. Napper.

Leicester.—Restoration work, Owston Parish Church, for the Parochial Council. Mr. Alwyn R. Dent, A.R.I.B.A., architect, 43, Bedford-row, London, W.C.1 :—

*J. & R. Agar, Leicester.

Linlithgow.—Twelve houses at Captains-park, for the Corporation. Mr. William Scott, architect, 112, High-street :—

Excavation, mason and brick — *J. Malone, Linlithgow.
Plaster—*E. Paris, Broxburn Cement Works, West Lothian.
Painter—*D. Grant & Son, 147, High-street, Linlithgow.
Joinery, carpentry and ironmongery—*W. C. Forsyth, South-street, Arnadale.
Slater — *G. Riddell, Ltd., Roseburn-street. Edinburgh.
Plumber—*J. Hodge, 115, High-street, Linlithgow.

London.—Lighting installation at the Central Library for the Hackney B.C. Borough Electrical Engineer :—

Linzell, Dickinson & Co.	£445 17 9
W. E. Westwood	364 15 6
A. F. Gordemer	350 0 0
W. F. Hill	330 0 0
W. Dennison & Son	290 0 0
Hackney Electricity Department	248 0 0
J. H. Golding	243 0 0
The Electric Specialist Co.	239 15 0
*A. E. Camidge & Co., Ltd.	219 4 6

¶London.—Tenders accepted by H.M. Air Ministry for the week ended September 17 :—

Officers' quarters and barrack block (Upavon)—W. E. Chivers & Sons, Ltd., Estcourt-street, Devizes.
Shore work (Felixstowe)—Christiani & Neilsen, 72-74, Victoria-street, S.W.1.
W.O's and airmen's quarters (Cranwell)—B. Pumfrey, Ltd., Wintern Works, Carlisle-street, Gainsborough.

¶London.—Tenders accepted by H.M.O.W. for the week ended September 23 :—

York—maintenance work—F. Shepherd and Son, Ltd., Blue Bridge-lane, York.
Hitchin—maintenance work—F. Newton, 94, Tile-house-street, Hitchin.
Ashton-under-Lyne—maintenance work—E. Marshall & Sons, Ltd., Stamford, Ashton.
Liverpool—maintenance work—J. W. Jones & Sons, Ltd., Allerton-road, Liverpool.
Taunton.—maintenance work—W. Potter & Sons, Watcombe House, Taunton.
General Post Office (South), E.C.—heating—Bright-side Foundry & Engineering Co., Ltd., 14, Chicheley-street, S.E.1.

London.—Cleaning and repairs to the chimney at the refuse destructor, for the Hackney B.C. :—

*G. C. Gold & Co., 44, Romford-road, Stratford. E.15 ..... £166

London.—New sub-station for The Grove district in Hebron-road, for the Hammersmith B.C. :—

Frederick Coyle & Co., Ltd.	£465
A. Foster & Co., Ltd.	439
R. Mansell & Co.	375
Wm. Walkerdine & Co., Ltd.	359
‡A. Pascall & Son, Ltd.	365

Manchester.—Alterations to Barker's Wine Bar, Oxford-street, for Messrs. Wilson's Brewery, Ltd., Monsall-road, Newton Heath. Mr. W. E. Highfield, resident architect, Brewery Offices, Monsall-road :—

*Building Department, Brewery Offices, Newton Heath, Manchester.

Manchester.—Extensions to the Sunday schools on the corner of Rochdale-road and Rudyard-street, Harpurhey, for the Lancashire Congregational Union and the Trustees of the Queen's Park Congregational Church, Rochdale-road. Messrs. Joseph Swarbrick & Son, F.R.I.B.A., architects, 14, John Dalton-street :—

*W. Thorpe & Son, Ltd., Manchester.

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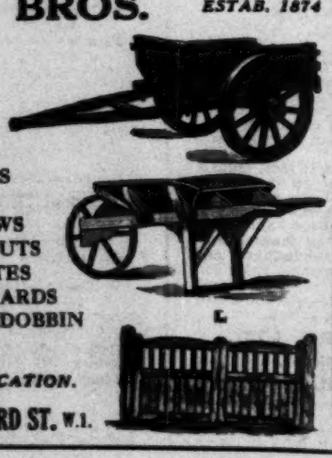

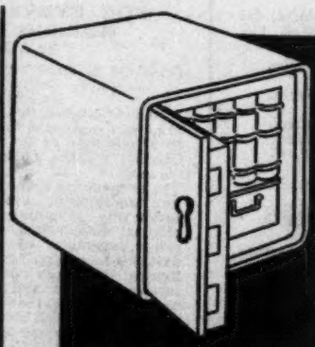
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